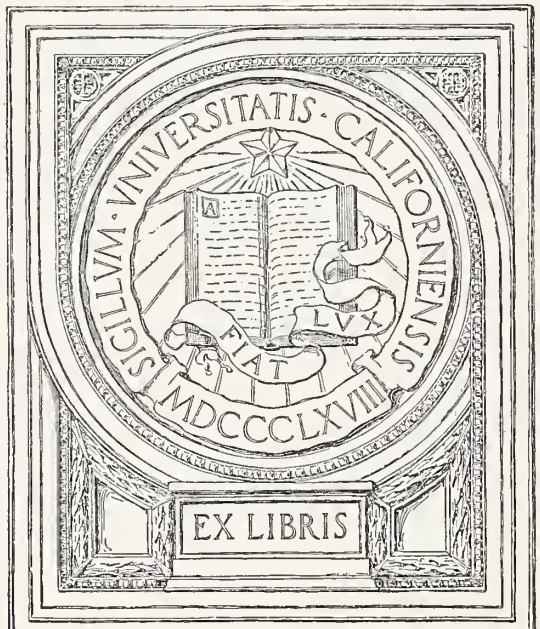
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Arizona Medicine

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MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

January, 1966
Vol. 23, No. 1

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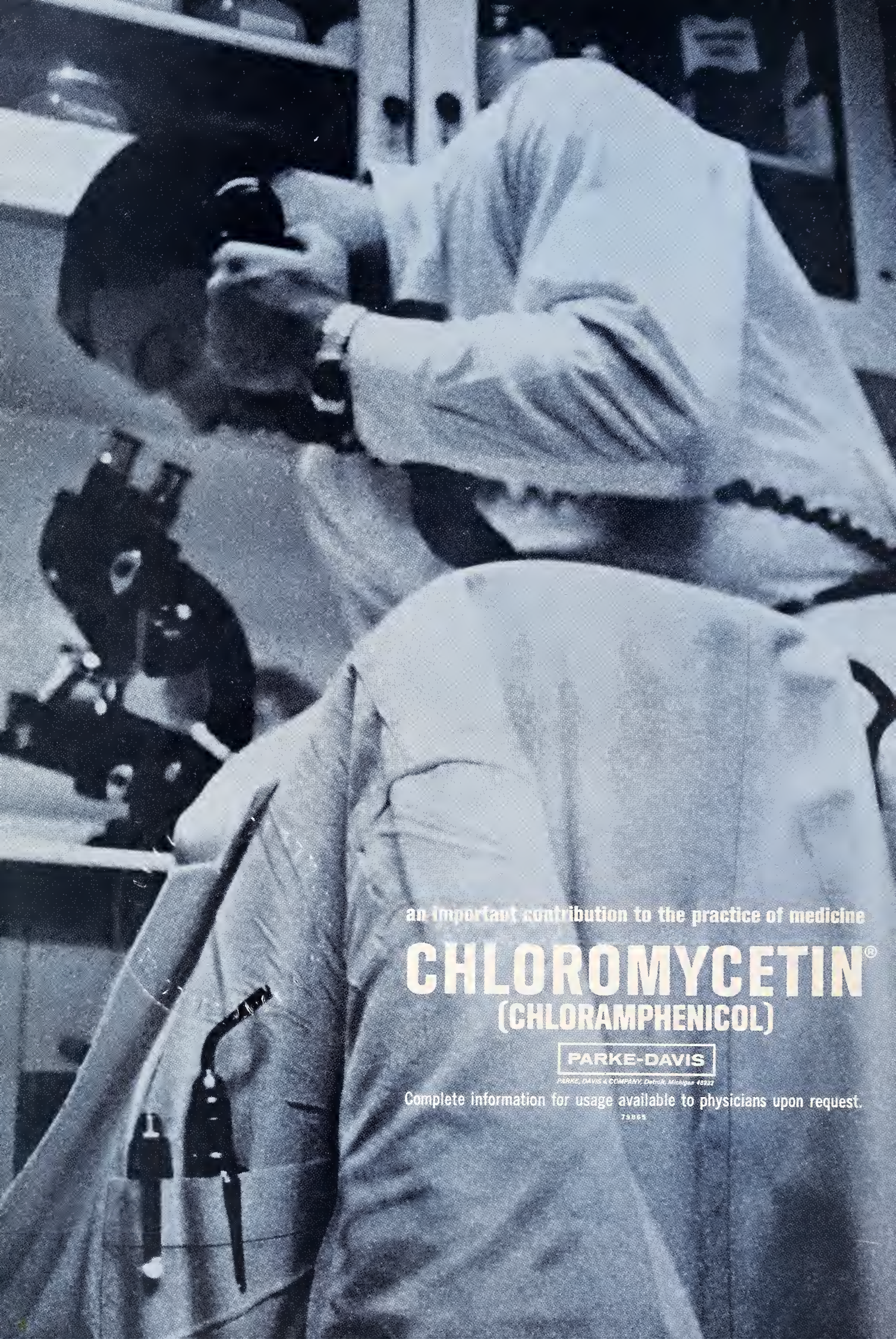
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(1) Frykman, H.M.: Minn. Med., Vol. 38, Jan. 1955. (2) Poth, E.J.: The J.A.M.A., Vol. 163, No. 15, April 13, 1957. (3) McGivney, J.: Texas State Jour. of Med., Vol. 51, No. 1, Jan. 1955. (4) Stern, F. H.: Jour. of The Amer. Ger. Soc., Vol. 11, No. 3, Mar. 1963. (5) Weekes, D. J.: N.Y. State Jour. of Med., Vol. 58, No. 16, Aug. 1958. (6) Abbott, P.L.: Jour. of Oral Surg., Anes. & Hosp. Dental Serv., Vol. 19, July 1961. (7) Weekes, D. J.: E.E.N.T. Digest, Vol. 25, No. 12, Dec. 1963.

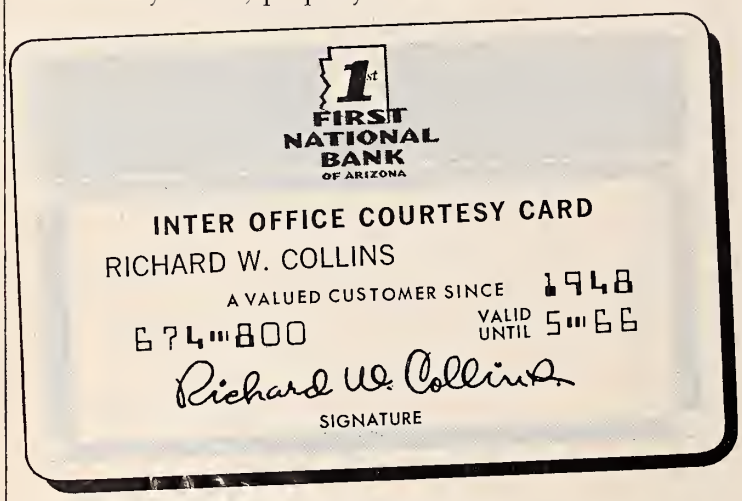
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Dosage: Usual starting dose, one tablet three or four times daily. May be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended even though higher doses have been used by some clinicians to control depression and in chronic psychotic patients.

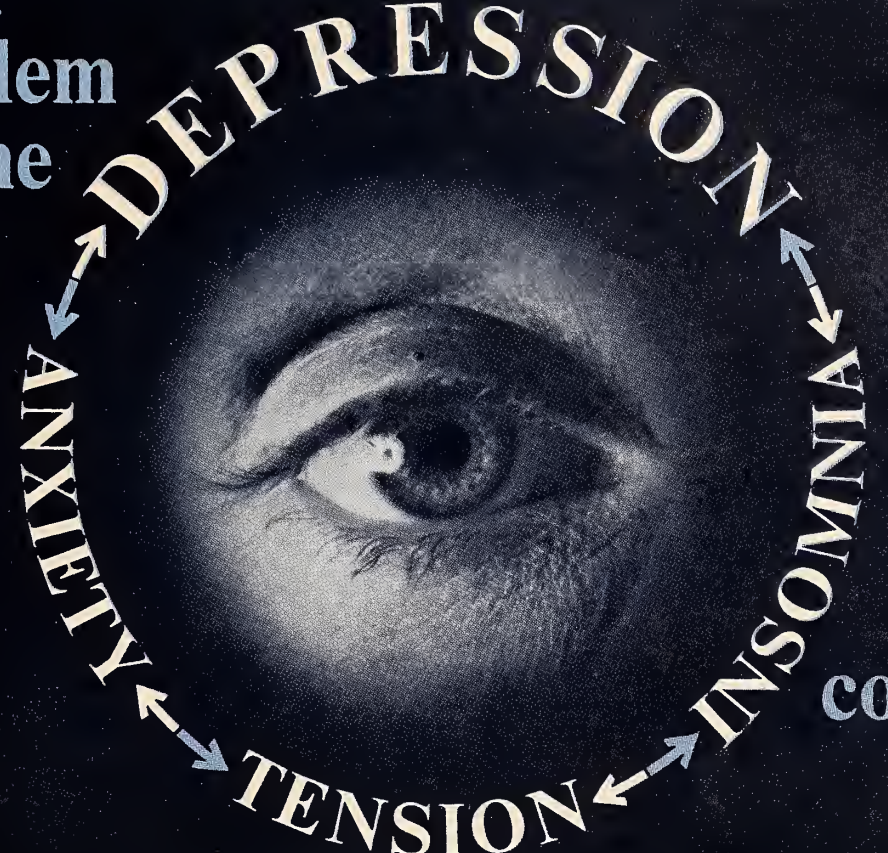
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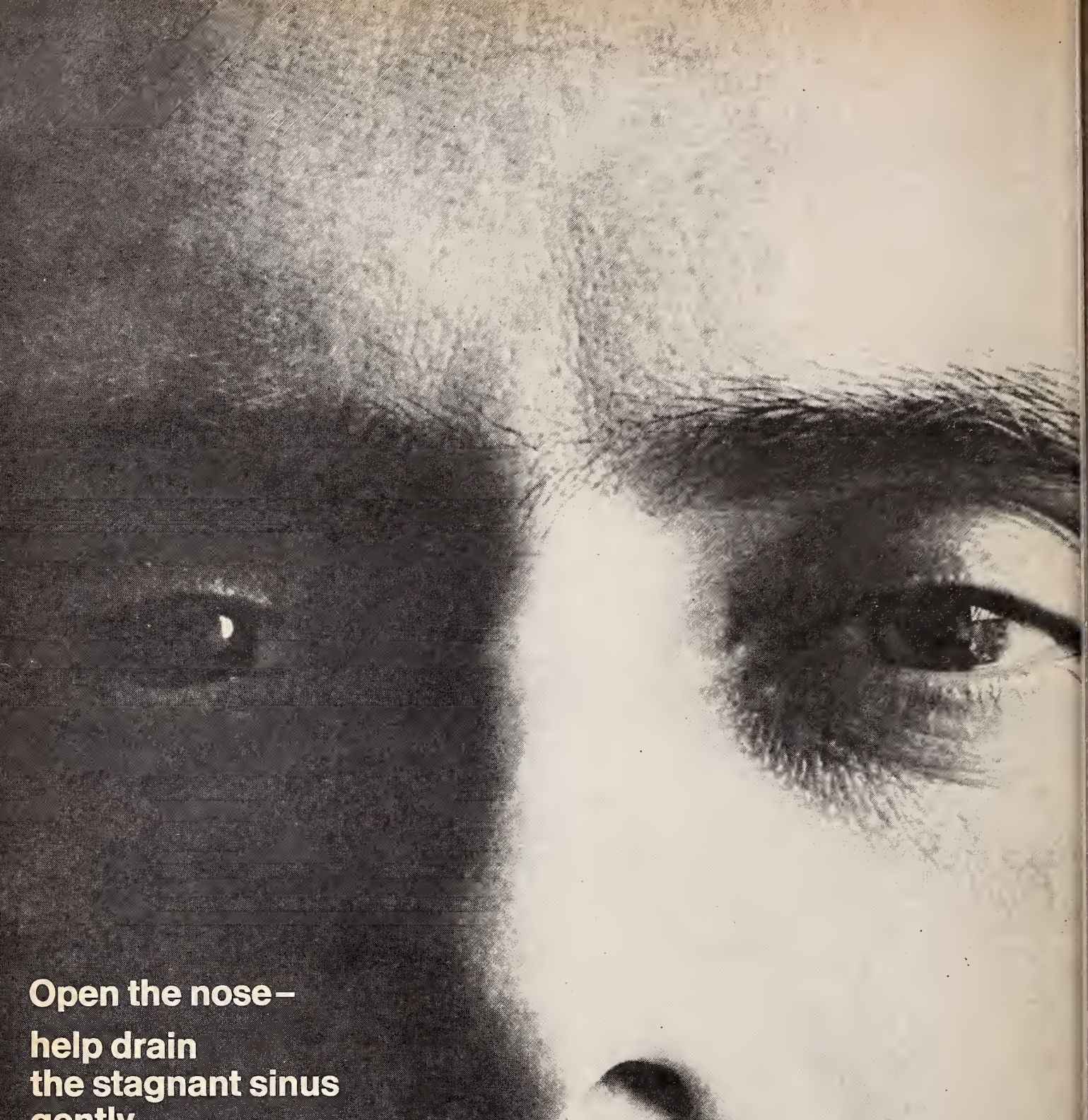
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*Proctor, D. F.: The Nose, Paranasal Sinuses, and Ears in Childhood, Springfield, Ill., Charles C Thomas, 1963, p. 34.

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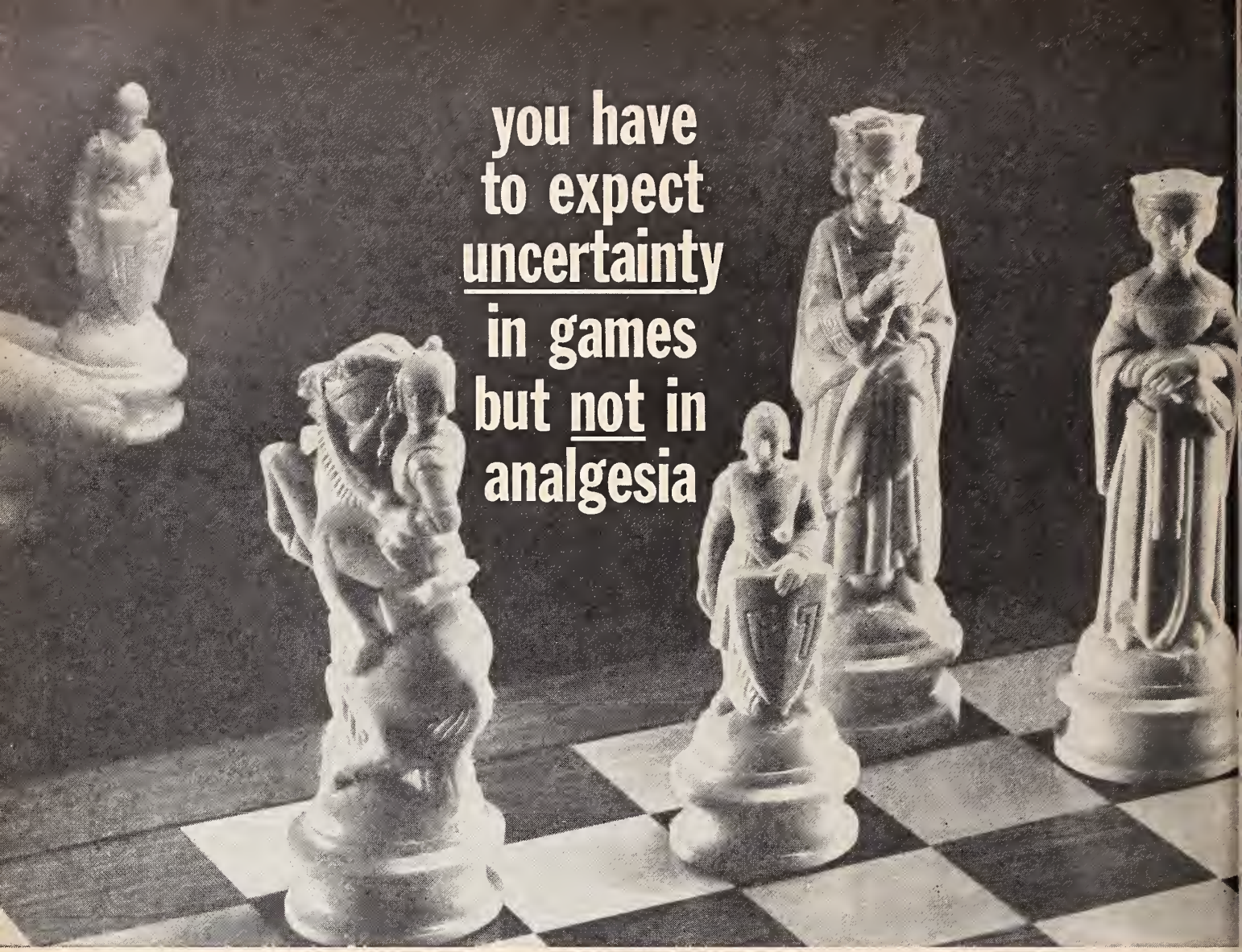
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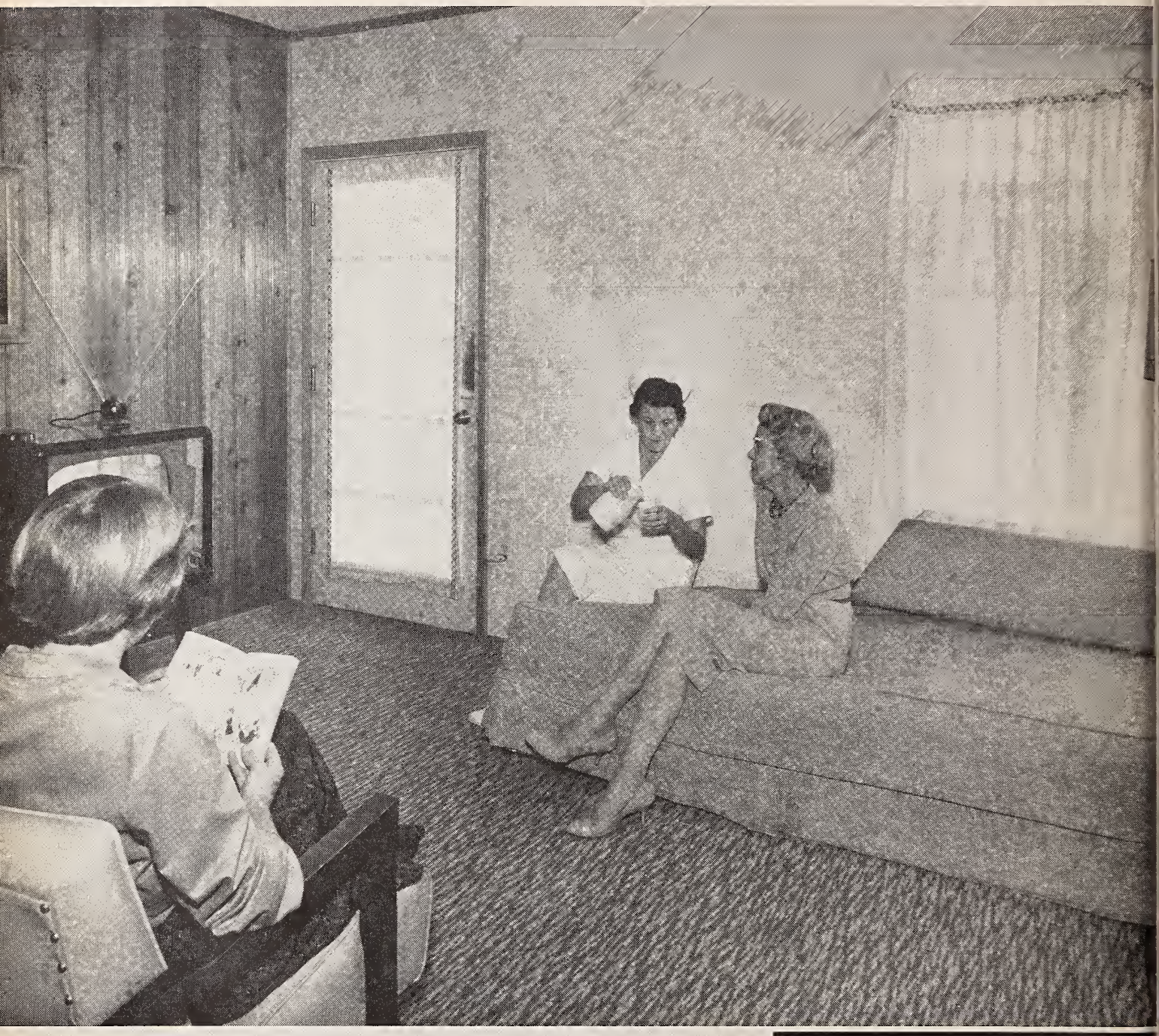
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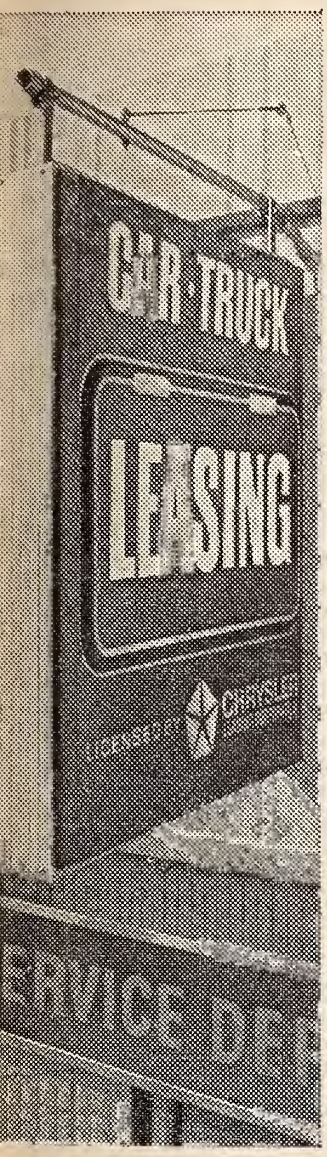
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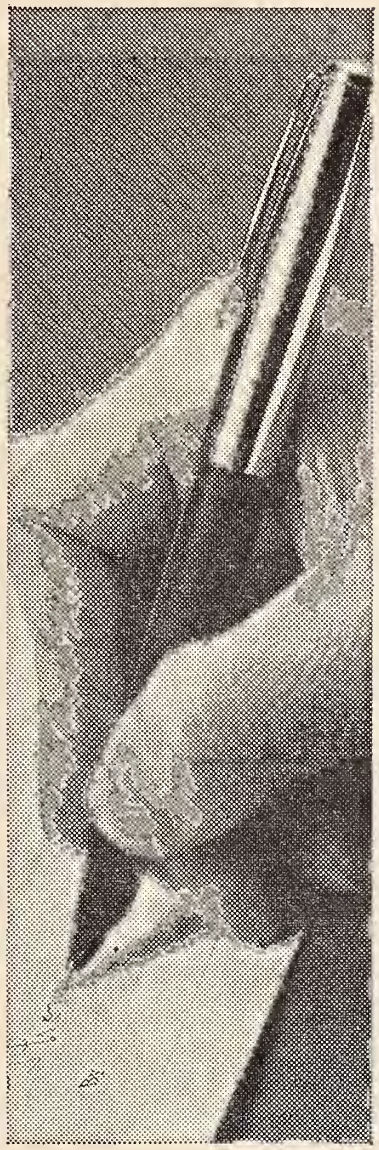
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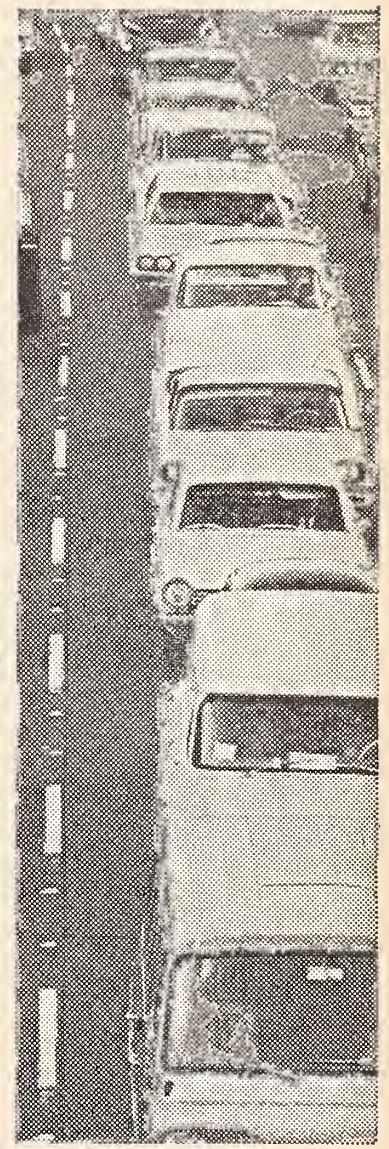
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GRAHAM: John H. Walker, M.D., President, 702 8th Avenue, Safford; Donald E. Nelson, M.D., Secretary, 503 5th Avenue, Safford.

GREENLEE: Stanton C. Lovre, M.D., President, Box 1687 Clifton; Gerhard L. Ihm, M.D., Secretary, Phelps Dodge Hospital, Morenci.

MARICOPA: Ray Fife, M.D., President, 2620 N. 3rd Street, Phoenix; Charles H. Finney, M.D., Secretary, 555 W. Catalina Dr., Phoenix.
(Society Office — 2025 North Central Avenue, Phoenix)

MOHAVE: Walter Brazie, M.D., President, Masonic Building, Kingman; John J. Standifer, M.D., Secretary, 412 E. Oak Street, Kingman.

NAVAJO: Claude H. Peterson, M.D., President, 1500 Williamson Ave., Winslow; Leo L. Lewis, M.D., Secretary, Santa Fe Medical Offices, P. O. Box 673, Winslow.

PIMA: Juan E. Fonseca, M.D., President, 601 N. Wilmont Rd., Tucson; Elliott E. Stearns, Jr., M.D., Secretary, 2442 E. Elm St., Tucson.
(Society Office — 2555 East Adams Street, Tucson)

PINAL: Chalmers D. Johnson, M.D., President, 1195 N. Arizona Blvd., Coolidge; Richard F. Adamson, M.D., Secretary, Florence Medical Center, Florence.

SANTA CRUZ: Deward G. Moody, M.D., President, 711 Morley Avenue, Nogales; Charles S. Smith, M.D., Secretary, Gebler Building, Nogales.

YAVAPAI: W. David Rummel, Jr., M.D., President, 114 North Montezuma, Prescott; William R. Shepard, M.D., 1003 Division St., Prescott.

YUMA: A. J. Ochsner II, M.D., President, 630 E. 26th Place, Yuma; Charles R. McReynolds, M.D., Secretary, 2232 - 17th Place, Yuma.

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SUBCOMMITTEE ON MEDICAL EDUCATION OF THE PROFESSIONAL COMMITTEE

Meeting of the Subcommittee on Medical Education of the Professional Committee of The Arizona Medical Association, Inc., held in the Central Office of the Association, Scottsdale, Arizona, Sunday, November 7, 1965, convened at 10:00 a.m., Dermont W. Melick, M.D., Chairman, presiding.

ROLL CALL

PRESENT:

Drs. Brazie, Walter; Caldwell, Hayes W.; Dysterheft, Arnold H.; Fredell, C. Herbert; Grauman, Samuel J.; Drs. Kohl, Sr., Harold W.; Melick, Dermont W., Chairman; Moody, Deward G.; Smith, Harry C.

GUEST:

Dr. DuVal, Jr., Merlin K., Dean, College of Medicine, University of Arizona, Tucson, Arizona.

EXCUSED:

Drs. Green, Monroe H.; Wormley, Lowell C.

PROFESSOR OF MEDICINE

Dr. Melick: You will remember that among other things at our last meeting a discussion was had with regards to the appointment of a professor of medicine. Dr. Duval reviewed the situation to date with the statement that in all probability the professor would be selected within the next few weeks. He stated there were six individuals under consideration with two of the six having the greatest potential and in all probability one of these two he mentioned will be offered the professorship soon.

FIRST CLASS ADMITTANCE

Dr. Melick: Dr. DuVal brought us up to date with regards to progress made towards admitting the first class in September of 1967. He said there had been at least two hold-ups on getting the plans ready for final adoption and that the date for letting the contracts for beginning construction, although originally contemplated for January of 1966, will probably not find this accomplished until July of 1966 and with a completion date thereafter of fifteen to eighteen months. At the earliest this would place the completion of the physical facilities for July of 1967, and if it extended any longer than this the admission of the first class would obviously be impossible for September of 1967. He indicated that the possibilities of a construction strike in the Tucson area was high and this would throw even this tight schedule out of line. Despite this the 1967 opening date has not been abandoned as of this time but it would seem exceedingly optimistic to believe that a guarantee can be placed on the 1967 date. There will be places for sixty-four students in the initial class.

FACULTY PRACTICE OF MEDICINE

Dr. Melick: The main reason for this meeting on November 7th was to discuss "The faculty practice of medicine." Dr. DuVal brought along a two-sheet informational pamphlet listing the arguments which are considered to be most important for and against practice by salaried faculty members of the Medical School. This is included in this mailing to the individuals not present at the meeting. There was considerable discussion regarding this and it was the unanimous consensus that two very pertinent points should be uppermost with regards to this problem. It would appear that the faculty members should be allowed to participate in the care of private patients, but only on a referral basis. This particular aspect will be defined more sharply by Dr. DuVal, and he will give us additional information and presentation at a later date. The other consideration has to do with a ceiling on income for faculty members. One type of plan working satisfactorily in other medical schools has to do with a basic salary and a ceiling income. All full-time professors might be paid a certain basic salary and be allowed to earn up to the ceiling established but in no instance to be allowed to retain any income 5% above the ceiling. Everything the individual earned above this would be returned to the Medical School for use to be determined by the University officials.

LOCAL PRACTITIONERS TEACHING PARTICIPATION

Dr. Melick: There was discussion with regards to the part that the physician in private practice in both Tucson and Phoenix would play in the teaching in the medical school and Dr. DuVal is quite emphatic about the necessity for participation of the "town physicians" in the teaching and adequate opportunity will be allowed for anyone qualified and willing to participate. He made mention of one particular aspect that he is exploring and this is evidently an idea originated by him. This has to do with a setting up of a "family practice clinic" as a part of Medical School wherein the general practitioner will be expected to have full responsibility. It will allow the general practitioner to indoctrinate the students in general practice. This is considered to be a satisfactory substitute for the request by the general practitioners of the state for a "Department of General Practice." This will allow the general practitioners to participate but there will **not** be an actual separate Department for reasons Dr. DuVal outlined. His reasons seem quite cogent and pertinent to those of us attending the meeting.

POST-GRADUATE MEDICAL EDUCATION

The Chairman reviewed the activities of the Subcommittee on Medical Education, noting that in general the activity had been limited and confined to sending a few speakers to the meetings of certain county medical societies. The membership of the committee believes the outlying county societies really want more activity in post-graduate medical education but they feel the wrong individuals have been contacted. Implementation might be better carried out if a letter was again sent to the president of each county society, rather than to the secretary. Another suggestion was made that the whole membership of the state association, (meaning

probably only those county societies outside of Tucson and Phoenix) be sent a letter to alert the members on the availability of programs originating out of this Subcommittee. It was suggested to the Chairman the questionnaire previously prepared also be enclosed and then see what response is obtained. This will be done.

TELEVISION PROGRAMS

Discussion was had with regards to presentations of television programs to the membership. Mr. Julian DeVries had been contacted previously by the Chairman. There was a good deal of discussion, mainly to decide whether the Subcommittee should promote television programs. One particular way it has been done in one state (Oklahoma) is to put the program out over the local educational television channel at an hour when the educational activity for the day had ceased. As an example: a medical program could be put out over the ASU channel 8 (KAET) at eleven fifteen in the evening and such a television broadcast would not be announced in the newspapers so no one (presumably) would know about th broadcast except the physicians. The fact that it might be tuned in by the general public was not thought to be a deterrent, mainly because the broadcast would be on such a specific limited medical subject as to be quite uninteresting to the general observer. There was discussion with regards to cost. It may be inexpensive, or it could be quite expensive. In any event, the Committee voted to continue investigation and a subcommittee was appointed to look into it in detail. The subcommittee members are Dr. Samuel J. Grauman, Chairman; Dr. Harold W. Kohl, Sr., Dr. Deward Moody, and Dr. Lowell C. Wormley. Dr. Merlin K. DuVal, Jr., agreed to participate, and he will be considered an appointment ex-officio to this particular subcommittee.

SOUTHWEST RESEARCH FOUNDATION

Dr. Hayes W. Caldwell and Dr. Merlin K. DuVal, Jr., as members of the board of directors of Southwest Research Foundation, presented a short resume of the intents and purposes of this foundation.

TOWN AND GOWN

Dr. DuVal made some optimistic statements with regards to the cooperation of the physicians over the state in support of his activities in setting up the Medical School. He stated that he was hopeful that the Town and Gown problem would be minimal but nevertheless recognized from a practical standpoint that areas of misunderstanding are unavoidable, but he hopes they will be minor in character.

MEETINGS

Some discussion was had with regards to the next meeting. It was decided that no set date is necessary. A meeting every six months is advisable. Any other meetings can be called at the request of Dr. DuVal through the Chairman or by the Chairman at the request of the membership.

Dermont W. Melick, M.D.
Chairman

SCIENTIFIC ASSEMBLY COMMITTEE

Meeting of the Scientific Assembly Committee of The Arizona Medical Association, Inc., held Sunday, November 21, 1965, in the Convention Center of the Safari Hotel, 4611 North Scottsdale Road, Scottsdale, Arizona, convened at 10:50 a.m., John S. Carlson, M.D., Chairman, presiding.

ROLL CALL

PRESENT:

Drs. Carlson, John S., Chairman; Dysterheft, Arnold H., Vice President; Gregory, T. Richard; Henderson, Charles E., Secretary; Jarrett, Paul B., President-Elect; McMoran, Charles W.; Nelson, Arthur R.; Zeluff, Reginald J. M.

STAFF:

Messrs. Carpenter, Robert, Executive Secretary; Robinson, Bruce E., Assistant Executive Secretary.

Guest:

Mrs. Stevens, Weir C.

EXCUSED:

Drs. Bennett, Warren A., Bregman, Edward H., Curtin, John F., Gordon, Alan L., Jackson, Jr., Ralph A., Knight, Frederick W., Moody, Deward G., O'Hare, James E., President; Phillips, Melvin W., Sattenspiel, Edward, Derickson, Philip G.

MINUTES

On motion regularly made and unanimously carried the minutes of the Scientific Assembly Committee held August 8, 1965 were approved as printed and circulated among the members.

HISTORICAL EXHIBIT BOOTH

Mrs. Weir C. Stevens, wife of Dr. Weir C. Stevens of Kearny, and historical authoress, presented her general plan for the preparation of a historical booth to be part of the 75th Annual Meeting.

Following discussion and approval of the project it was suggested that Mrs. Stevens ask Dr. Robert Flinn to assist in this project. It was determined that the Woman's Auxiliary be contacted to assist in manning the booth.

Many of the Committee members offered to assist Mrs. Stevens in obtaining the necessary items.

It was recommended to the Board of Directors that an appropriate sum be made available to defray the costs involved in preparing this exhibit.

Mrs. Stevens was complimented by the Committee for her outstanding leadership in this project.

PROGRAM COVER CONTEST

Mr. Robinson reported that two valid applications (those meeting all rules) have been received, but that he was aware of at least four more that were to be expected. It was reported that the total costs to date, including the $200.00 in prizes, and promotion, amounted to $657.11.

GOLF TOURNAMENT

Dr. Carlson reported that Dr. Wayne F. Winn will assist Dr. Thomas C. Wilmoth, Chairman. The location of the tournament is yet to be determined.

Discussion ensued over the matter of sending out the double postal card for registration purposes. It was recommended that this practice be stopped and that in

place of sending these cards up to $100.00 be made available to the Committee Chairman for the purchase of trophies, said purchase to be made after the tournament was concluded. The expenses for this mailing for the Golf Tournament held during the 1965 annual meeting amounted to $164.53.

BOWLING TOURNAMENT

It was reported that Dr. Roy O. Young, Chariman, has not as yet arranged for the Bowling Tournament location.

Discussion ensued over the matter of sending out the double postal card for registration purposes. It was recommended that this practice be stopped and that in place of sending these cards, up to $100.00 be made available to the Committee Chairman for the purchase of trophies, said purchase to be made after the tournament was concluded. The expenses for this mailing for the Bowling Tournament held during the 1965 annual meeting amounted to $164.54.

COMMERCIAL EXHIBITS

It was reported that only twenty-two of the fifty-two Commercial Exhibit booths have been reserved as follows:

Abbott Laboratories
A. H. Robins Co., Inc.
Canright Corp.
Ciba Pharmaceutical Co.
Coca Cola Company
G. D. Searle & Co.
J. B. Roerig & Co.
Mead Johnson Laboratories
Medco Products, Inc.
Merck Sharp & Dohme
Ortho Pharmaceutical Corp.
Parke, Davis & Company
Person & Covey, Inc.
Physicians & Surgeons Underwriters
Rocky Mountain Pharmacal
Smith, Miller & Patch, Inc.
The Stuart Company
The Upjohn Company
The Wm. S. Merrel Co.
U. S. Vitamin & Pharmaceutical Corp.
Sandoz Pharmaceuticals
Valley National Bank

Following much discussion each member of the Committee agreed to contact detail men of the firms not exhibiting to see if greater participation could be developed.

It was noted that Eli Lilly has chosen to contribute $250.00 toward the expense of one of the guest speakers. It was generally agreed that effort should be made to get other firms who are not exhibiting to sponsor speakers. It was agreed that a minimum of $250.00 would be required as a speaker sponsor.

It was also determined that those firms wishing to contribute less than $250.00 could do so and have their name printed in the program as contributing to the 75th Anniversary program. These firms would also be invited to send a representative to attend, as our guest, the Wednesday evening Chuck Wagon dinner.

SCIENTIFIC EXHIBITS

It was reported that at present no applications have been received for Scientific Exhibit booth space. It was noted that at least two persons had indicated an interest.

CHUCK WAGON DINNER

Dr. Carlson advised that he would confirm the square dance group and band for this event scheduled for Wednesday evening.

PRESIDENT'S BANQUET

A discussion of inviting other than ArMA members to the President's Banquet scheduled for Thursday, April 28th, was followed by the determination that each registered ArMA member may invite as his personal guest, and at his expense, those of his choice.

The meeting adjourned at 1:15 p.m. for lunch.

MEETING RECONVENED AT 2:30 P.M. WITH ALL MEMBERS IN ATTENDANCE.

SCIENTIFIC SECTION PROGRAM

Panel Presentations

Four panel discussion subjects were scheduled as follows:

Thursday — April 28, 1966 — 7:30 a.m.

Subject: "Office Handling of Nervous People" — It was suggested that in addition to a psychiatrist from Northwestern, that panel be supplemented by two local psychiatrists. Dr. William Sheely and Dr. William McGrath were suggested.

Thursday — April 28, 1966 — 3:15 p.m.

Subject: "Medicare" — It was suggested that along with Dr. William Moore that Dr. Ernest Howard, Assistant Executive Vice President of AMA, and a representative of the Washington Office of the Department of Health, Education and Welfare, be asked to participate in this panel discussion.

Friday — April 29, 1966 — 7:30 a.m.

Subject: "Arthritis and Gout" — This panel to be sponsored by Merck, Sharp and Dohme, using their representative, Dr. Donald F. Hill of Tucson. The panel to be composed of a local orthopedist, radiologist and an internal medicine man from Northwestern.

Friday — April 29, 1966 — 3:15 p.m.

Subject: "Trends in Nursing" — It was suggested that this panel have at least three R.N.'s representing the various philosophies of nursing education. It was also suggested that Dr. Dermont Melick be asked to moderate this panel.

Scientific Papers

The following suggestions for subjects of scientific papers were made.

Friday — April 29, 1966 — 9:15 a.m.

Subject: "The Psychology of the Unwashed" (Beatniks, Kooks and Pseudo-intellectuals)

Following considerable discussion on speakers and subjects it was determined that the Chairman would complete the program in consultation with Dean Young of Northwestern University Medical School, keeping in mind the various by-law restrictions.

OTHER BUSINESS

Opening Session—Wednesday, April 27, 1966—10:00 a.m.

The following suggestions were made toward this portion of the program.

Invocation and Memorial Service

Dr. Paul B. Jarrett suggested that Dr. Fletcher H. Scharer, Minister of the First Methodist Church of

Phoenix, be asked to preside. Dr. Jarrett indicated that he would make contact with Dr. Scharer.

Welcome

It was suggested that Dr. Ray Fife, who will be President of the Maricopa County Medical Society in 1966, be asked to make the welcoming address.

Response

It was suggested that Dr. Daniel Bright of Cottonwood be asked to deliver the response address.

MEETING ADJOURNED AT 3:15 P.M.

Charles E. Henderson, M.D.
Secretary

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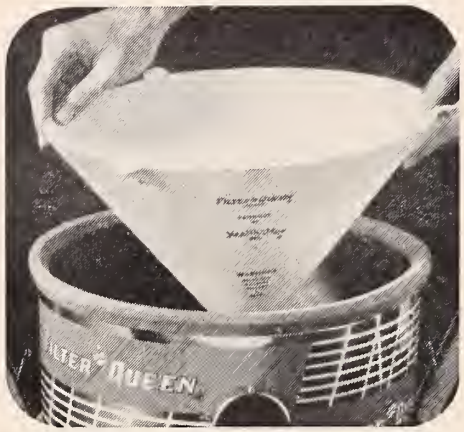


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3 Now turn the machine over to any one witnessing the demonstration, and have her start the machine and apply the nozzle to any place where there is obvious dirt and dust. Keep the machine operating for a full minute.

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4 Remove the top of the container, and lift out the handkerchief. You'll find it spotless as it was when it went in! (Where did the dirt go? Look in the bottom of the container.)



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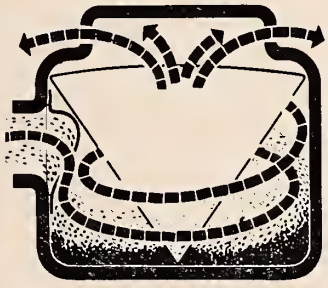
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Why not ask your local FILTER QUEEN Distributor to make the dramatic handkerchief test (pictured at left) in your hospital? There is no better way to prove the improvement in cleaning ability between a FILTER QUEEN SANITATION SYSTEM and any type of vacuum cleaner. (You'll find your distributor listed in the Yellow Pages; or write Health-Mor, Inc. direct).

**We will be glad to send you a reprint of this report on request.*

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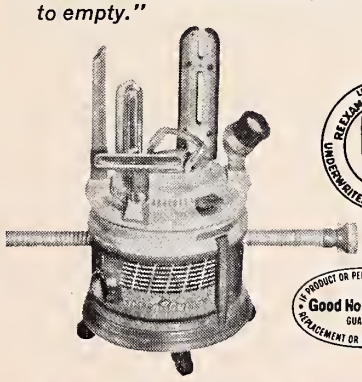
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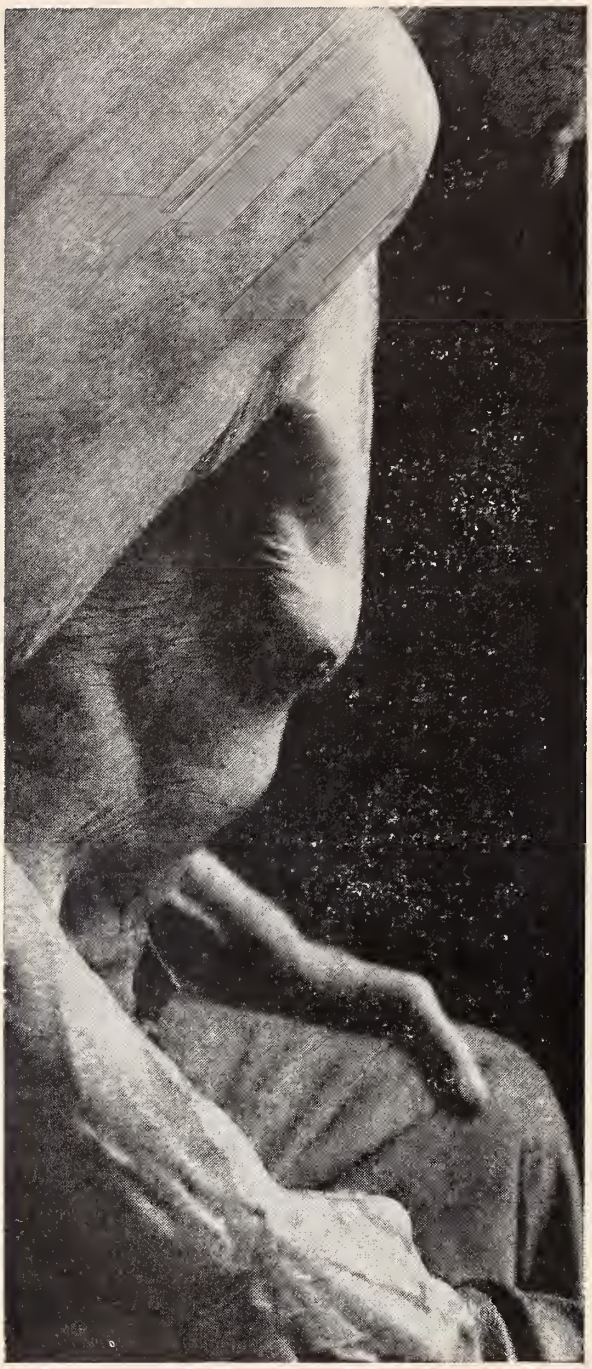




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The Diagnosis And Medical Management Of The Acute Stroke



John Gilroy, M.D.

Stroke is a major cause of death and disability in this country. In this article the author succinctly discusses the differential diagnosis and management of the various types of acute strokes.

A stroke may be defined as the sudden onset of a neurological deficit due to the interruption or impairment of the blood supply to an area of the brain. Stroke is a major problem in the United States, accounting for 200,000 deaths and some 300,000 new cases every year. It is the third commonest cause of death after heart disease and cancer.

The improvement in the understanding of the pathogenesis of stroke has led to new approaches in the active treatment of the acute case, but it is also apparent that the most fruitful approach lies in the prevention of stroke by early detection of susceptible patients.

Diagnosis of the Acute Stroke

The commonest cause of an acute stroke is a "cerebral" thrombosis, which may be due to thrombosis involving one of the major vessels in the neck (i.e., a carotid or vertebral artery), or a cerebral artery. Other possible causes must always be considered, including cerebral embolism, intracerebral hemorrhage, subdural hematoma, subarachnoid hemorrhage and brain tumor.

From the Department of Neurology, Wayne State University and Harper Hospital, Detroit, Michigan.

Presented at the Symposium on Treatment of Stroke May 23, 1965, Tucson, Arizona. Co-sponsored by St. Mary's Hospital, and Geigy Pharmaceuticals.

Cerebral thrombosis is most frequently characterized by:

1. Onset during sleep or while inactive.
2. Absence of headaches.
3. Slow progression of symptoms.
4. Absence of neck stiffness.
5. Clear cerebrospinal fruit (CSF).
6. Wide swings in blood pressure.
7. Previous episodes of a transient nature.

The last point is important in that the transient episodes are frequently ignored by patient and doctor. Recognition of their importance might, however, lead to prevention of the catastrophic stroke and its disabling sequelae.

Cerebral embolism usually presents with the following signs:

1. Onset sudden.
2. Absence of headache.
3. Signs maximal at beginning but repeated embolic episodes may occur.
4. Absence of neck stiffness.
5. Clear CSF.
6. No previous episodes of transient cerebral vascular insufficiency.

7. Underlying heart disease may be present or mural thrombi on plaques in the carotid or vertebral arteries in the neck.

Intracerebral hemorrhage carries the highest mortality and is almost invariably the result of chronic hypertension, a treatable condition. It is characterized by.

1. Headache, nausea, vomiting at the onset.
2. Onset with seizures.
3. Rapid deterioration to coma, Cheyne-Stokes respirations, hyperventilation, conjugate deviation of the eyes, dilatation of one pupil due to brain stem compression.
4. Neck stiffness and bilateral extensor plantar responses.
5. Blood or xanthochromia in the CSF, on spinal tap, in 90% of cases.
6. Hypertension at the initial examination.
7. Usually occurs when the patient is active.

A chronic subdural hematoma may mimic a stroke and should always be considered in the elderly patient or the alcoholic. Recognition often depends upon a high index of suspicion but is most rewarding in that a potentially lethal condition can be cured by a simple neurosurgical procedure with the possibility of a full recovery.

The following suggests subdural hematoma:

1. History of head injury (this may be seemingly trivial).
2. Headache.
3. Fluctuations in level of consciousness.
4. Intellectual deterioration.
5. Absence of neck stiffness.
6. CSF xanthochromic unless underlying brain contusion when it will be bloody.
7. Skull x-ray may show a linear fracture.

Occasionally a brain tumor may present with symptoms suggesting a stroke. This may be due to pressure by the expanding tumor on intracerebral vessels, or due to hemorrhage, or edema associated with the tumor.

The following suggest a brain tumor:

1. Onset insidious with slow progression of symptoms.
2. Associated focal seizures.
3. Headaches and vomiting, worse in the morning on awakening.
4. Signs of increased intracranial pressure, eg. papilledema.
5. Increased CSF pressure and raised protein on spinal tap.
6. Normal blood pressure, absence of history of hypertension and signs of vascular disease.
7. X-ray of skull may show displaced calcified pineal gland.
8. X-ray of chest may show tumor mass, when brain tumor is metastatic.

General Principles of Treatment in Stroke

There are certain general principles which may be applied in the treatment of the stroke patient. The routine outlined for the treatment of cerebral thrombosis is applicable with minor modifications to cases of cerebral embolism and intracranial hemorrhage.

In the acute stroke due to cerebral thrombosis when the patient is stuperous or comatose, the following treatment is suggested:

1) **Ventilation:**

a. Turn patient every 2 hours: from right lateral to left lateral to supine. Keep airway clear with careful suctioning. Remove dentures. If secretions accumulate and suctioning is needed frequently (eg. every 10 or 15 minutes) tracheotomy is indicated. Tracheotomy should be performed before anoxia and cyanosis have developed.

b. Oxygen is needed only if the cardiac status makes it mandatory. Oxygen increases cerebral vaso-constriction.

c. The chest should be examined daily. Atelectasis is common in the stroke patient. Drainage of secretions can be aided by postural drainage. Atelactasis, bronchitis or pneumonia require the addition of antibiotics.

2) **Blood Pressure and Cardiac Management:**

a. Hypertension should be treated cautiously. The majority of patients show a steady fall in blood pressure with bed rest. If systolic pressure remains above 180 mm. of mercury, Reserpine 0.25 mg. IM q12h is usually effective. Attempt should be made to maintain the systolic blood pressure at 140-160 mm. of mercury.

All cases should have the blood pressure checked hourly during the first 24 hours. Sudden peaks of systolic pressure, or transient hypotension, are then less likely to be missed.

b. Hypotension should be treated with Vasopressor agents. If there is no response, parenteral steroids are indicated on the assumption that there is adrenal insufficiency.

c. Myocardial infarction may be the pre-

cipitating factor in an acute stroke and electrocardiogram should be taken in all cases. Congestive heart failure and arrhythmias should receive prompt treatment.

3) **Bladder Care:** A Foley catheter is always needed in the comatosed and Semi-comatosed patient. Irrigation with a suitable antiseptic should be carried out twice daily. After 24 hours, the catheter may be clamped, then drained and reclamped every 2 hours. Accurate intake and output records are important. It is necessary to remain aware of the use of the Foley catheter in any stroke patient. All too often it becomes a forgotten instrument and the patient is condemned to unnecessary use of a catheter. Removal of the catheter at the earliest possible moment is strongly advised.

4) **Positioning:** Every stroke patient should be turned every 2 hours for pulmonary prophylaxes and prevention of decubiti. A foot board is useful in the prevention of tightening of the heel cord: sandbags can be used to prevent rotation at the hip and a pillow in the axilla will prevent adduction deformity. The paralyzed hand should be maintained in a functional position with a hand roll. All limbs should be placed through full passive range of motion daily.

As soon as the patient is conscious and cooperative, and if a physical therapist is available, a program of re-education and strengthening exercises for all extremities should be started. It is important to maintain strength and mobility in the non-affected limbs which may have to assume added functions as the patient improves.

5) **Feeding:** In the first 24 hours after the stroke, the patient can be given 3,000 cc. of 5% dextrose in 0.2 N. saline, intravenously (unless the cardiac status should contraindicate infusion of this volume of fluid). To minimize the risk of electrolyte imbalance, a nasogastric tube should be passed during the second 24 hours and 3,000 cc. of water given in divided amounts (eg. 250 cc. every 2 hours). This obviates the risk of flooding the lungs with a blender diet, should the tube have inadvertently passed into the trachea. During the 3rd 24 hours, 2,000 cc. of blender diet, plus water to a total of 3,000 cc. should be given at the rate of 250 cc. every 2 hours, via the nasogastric tube.

As the patient recovers consciousness, his ability to swallow should be tested daily with a small volume of water from a feeding cup. Once the swallowing mechanism is functioning, the nasogastric tube is removed and a fluid diet is given by mouth.

6) **Vasodilator** may be of help in the treatment of the acute stroke. Any method of inhancing collateral circulation in the brain should minimize the area of infarction and reduce the final neurological deficit.

Carbon dioxide is a potent cerebral vasodilator and can be given using a tightly fitting plastic face mask with rebreathing bag. Patients are usually able to tolerate 5% CO_2 in 95% O_2 inhalations at 7 liters per minute, 15 minutes every hour.

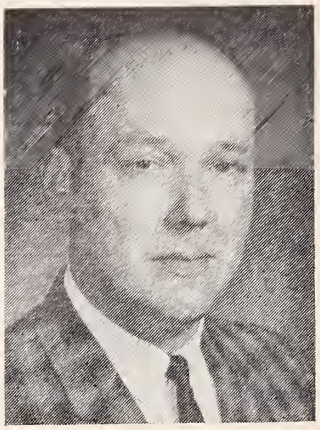
Intravenous papaverine may also help and can be given instead of carbon dioxide inhalations. A 10 day routine, using 500 mg. of papaverine in 1,000 cc. of 5% dextrose in water intravenously, over an 8 hour period, is recommended. This is followed by 8 hours without therapy. then 8 hours intravenous papaverine, in alternate fashion for the 10 day period. There should be frequent changes in the vein used for infusion, since phlebo-thrombosis may occur.

7) **Anticoagulants and Thrombolytic agents are contraindicated in the acute stroke.**

In the treatment of intracerebral hemorrhage, the general principles outlined under Ventilation, Blood Pressure and Cardiac Management, Bladder Care, Positioning and Feeding apply equally to this condition. Treatment of hypertension may need more potent antihypertensive agents, if the blood pressure is refractory to Reserpine. Vasodilator drugs are not indicated in intracerebral hemorrhage.

In cases of subarachnoid hemorrhage due to ruptured berry aneurysm, or arteriovenous malformation, the patient should be treated in general as already outlined. However, these patients are often suffering severe headache and the liberal use of analgesics is recommended with morphine, or Demarol initially, and Codeine later. The action of these drugs may be potentiated by a phenothiazine preparation, which also prevents vomiting.

The patient with subdural hematoma requires surgical drainage of the hematoma, as soon as possible. Where the post-operative course included a period of coma or confusion, the general principles of treatment of the stroke patient are applicable.



George Nash, M.D.

The Surgical Stroke

In this interesting clinical review Dr. Nash emphasizes the difficulties in precise clinical and laboratory diagnosis in the "stroke patient." However, the definite potential for surgical cure in some of these "hopeless" paraplegics is deemed worthy of all possible effort. A program for case selection is outlined. Bed side judgment combined with a total intra-arterial contrast study are of major diagnostic importance. Ultrasonography is also of value in selected patients.

Introduction

THERE are 350,000-400,000 cerebrovascular accidents each year in the United States with 150,000 deaths. Only heart disease and cancer lead in mortality. No disease, however, can cause as much loss of human dignity and personal suffering as the cerebrovascular accident. Consider the disabling paralysis, loss of speech, sphincter incontinence, catastrophic change in personality and loss of intellectual ability. It is estimated that there are a half million living hemiplegics in the United States at any one time with their accompanying social and economic problems.

In the recent past, strokes have not been considered amenable to treatment. An aura of therapeutic nihilism has existed. With the advent of cerebral angiography and the development of modern medical and surgical techniques, new interest in the problem of cerebrovascular disease has developed. Many patients hitherto considered beyond medical aid have been salvaged, rehabilitated, and, in some instances, dramatically cured of disabling symptoms. Consequently, no longer will it suffice to make the simple diagnosis of "stroke." It is now mandatory to determine the type of cerebrovascular accident, its location, and the extent of involvement. After this has been determined, the physician must select the appropriate medical or surgical therapy best suited for each individual patient. To quote Hippocrates, "The decision is often difficult, the occasion fleeting, and the experience liable to error." Perhaps no where is clinical judgment and the art and science of medicine more important in selecting the proper course of action.

It is the purpose of this paper to discuss the surgical cerebrovascular accident. The classical categorization of stroke into hemorrhage, thrombosis and embolism is still valid in any etiologic consideration of the problem. These categories, however, have been greatly modified and expanded. Hemorrhage can be either intracerebral or subarachnoid. Intracerebral hemorrhage may be primary or secondary to aneurysms, A.V. malformation, telangiectasis, anticoagulation therapy, tumors, blood diseases and arteritis. Subarachnoid hemorrhage is, of course, a subject unto itself and will not be discussed in this paper.

Thrombotic occlusive disease of the cerebral vessels is the most common cause of cerebrovascular accidents. Until recently, we considered

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these to occur either in the intracranial carotid or the vertebral basalar system. The transient disturbances of cerebral function were considered "little strokes" or secondary to angiospasm. With the advent of cerebral arteriography we have found that the extra cranial portion of the cerebrovascular tree is frequently the site of a partial or complete occlusion as high as 43% in some series. Milliken and associates have adopted a working classification of thrombotic occlusive disease. This classification is:

1. Transient ischemic attacks.
2. Advancing stroke.
3. Completed stroke.

This classification will be utilized in this presentation.

Embolism remains an important cause of cerebrovascular accident. It is usually associated with valvular heart disease, myocardial infarction or arrythmia. We will now consider the surgical management, problems and end result in each of the aforementioned categories.

Hemorrhage

I will restrict my remarks to primary intracerebral hemorrhage excluding subarachnoid or intracerebral hemorrhage from any primary disease process, congenital or acquired, such as aneurysm, A.V. malformation or tumor. Management of these problems is beyond the scope of this paper.

In primary intracerebral hemorrhage, no other disease process is evident. The patients are usually 40 to 70 years of age and over 80% of them are hypertensive. These cases constitute the so-called "classical hemorrhagic cerebral apoplexy."

Various changes in the small perforating vessels, degenerative disease, cryptic hemotomas, micro aneurysm, microscopic telangiectasis and subintimal dissection have been implicated in the pathogenesis. Pathological identification of the underlying process is difficult, if not impossible, for the hematoma usually destroys the evidence. The site of hemorrhage is usually near the internal or external capsule in the case of the cerebral hemispheres and possibly from branches of the superior cerebellar artery in cerebellar hematoma. The more medially placed hematomas may extend into the ventricular system or thalamus and are usually fatal. The laterally placed hemorrhages may dissect along fiber tracts and present in the frontal, temporal or parietal areas. These hemorrhages may cause symptoms by displacement or distortion of the brain stem. The overall mortality rate has been quoted as from 51 to 62%.

Symptoms

In McKissock's series[1] only 50% of patients with intracerebral hemorrhage had the classical sudden onset of headache, loss of consciousness and neurologic deficit. In 35% of the patients the evolution was gradual without loss of consciousness, and in 15% the symptoms were suggestive of tumor. The atypical cases (50%) were complicated by a clear cerebral spinal fluid in 20%. The majority of the patients with cerebellar hemorrhage did not present with signs referable to the cerebellum or posterior fossa, but had limitation of consciousness with hemiparesis or hemiplegia. The cerebellar lesion was suggested by small or pin point pupils. The importance of the differentiation between posterior fossa hemorrhage and supretentorial hemorrhage will be discussed later.

Diagnosis

The patients with sudden onset of headache, with or without loss of consciousness, neurological deficit and bloody cerebrospinal fluid offer no problem in diagnosis. Patients with gradual evolution of symptoms and with clear cerebrospinal fluid can be difficult. Ultrasonography is of aid in the diagnosis through the demonstration of a shift of the midline structures. Arteriography may also be necessary in this group to demonstrate any displacement or shift of intercranial vessels. If on sonographic examination there is a suggestion of ventricular enlargement and if bowing of the anterior cerebral artery is found angiographically, one may suspect a posterior fossa hematoma. The real diagnostic problem occurs in patients with infarction, subsequent edema, and shift. This group can be easily mistaken for intracerebral hemorrhage with clear spinal fluid and visa versa. The treatment of an infarction is not surgical. I know of no way to solve this diagnostic dilemma at present. Clinical judgment is of prime importance.

Treatment

How then do we decide which patient should be subjected to surgery? Since the first successful removal of an intracerebral hematoma by Cushing in 1903, much confusion and considerable difference of opinion have existed regarding the surgical treatment of primary intracerebral hemorrhage. This has varied from the attitude that every patient should be operated upon, to the view that surgery has nothing to offer. It is

generally agreed that surgery has little to afford the patient who is deeply comatose when first seen, particularly if there is fluctuation in vital signs. The only possible exception to this statement is in the case of a cerebellar hematoma. The level of consciousness 24 hours after the onset, appears to be the most important factor in selecting surgical candidates. In published surgical series, those in coma 24 hours after the stroke had a 100% surgical mortality. Those in stupor had a 75% mortality. It is obvious that surgical consideration should be reserved for certain, restricted groups: (1) Those patients in whom there is gradual evolution, stabilization and then gradual deterioration. (2) Those who show considerable improvement but in whom a severe neurologic deficit persists and in whom the lesion is surgically accessible. (3) Those who stabilize and improve but who exhibit marked fluctuation in their clinical state, and (4) those patients in whom cerebellar hematoma, previously poorly documented, and presently still difficult to diagnose, may constitute a surgical emergency. Recent reports have shown that evacuation of a cerebellar hematoma may be followed by complete recovery of the patient. The results of surgery so far in this group of cases seem far better than the comparable supratentorial lesions.

Thrombosis

With the advent of angiography, the importance of extra cranial vessel occlusion in cerebral vascular diseases has been recognized. In some series, the incidence of vascular occlusive disease has been as high as 43%. The first successful operation for carotid occlusion was done in 1955. Since then enthusiasm for the investigation and active surgical management of occlusive disease has been intense. Indeed, these observations have spurred a new interest in the whole problem of "stroke" and have given rise to combined efforts to learn more about the basic problems of vascular disease, as well as the natural history of the condition. With experience, we have found that surgery is not a panacea. However, in certain selected cases surgery can afford relief of symptoms, improvement in neurologic deficit, and prolongation of life.

Selection of Surgical Candidates

The selection of patients for surgical procedures depends upon many variables. The location and extent of the disease process, the age of the patient, the presence or absence of hypertension, kidney or heart disease, socio-economic, psychological factors, and lastly, the availability and skill of the attending physicians. Considering these factors, who then may be considered candidates for surgery? With very few exceptions, the patient with a completed stroke will not benefit from surgery. In younger patients, an attempt to re-establish circulation might be indicated. This would not be to relieve neurologic deficit, but would be performed prophylactically to prevent future occurrences due to contralateral disease. There are no final statistics to guide us in making this decision.

The majority of patients who are possible surgical candidates are those with transient ischemic attacks. I feel that the young, otherwise healthy patient, is a proper candidate. The hypersensitive patient without renal or cardiac disease, who cannot be considered for anticoagulation therapy also is a proper candidate. In this group, age is a factor, but a physciologic not chronologic estimate is important. Patients with persistent transient ischemic attacks, while adequately anticoagulated, may be benefitted by surgery. All patients with evidence of occlusive disease in the subclavian innominate and carotid branches of the aortic arch should likewise be evaluated for surgical therapy. The finding of a reduced radial pulse, a blood pressure differential in the two arms and a bruit over the apex of the thorax aid in selecting this group of patients. The results of this surgery have been good and the mortality and morbidity rate is quite acceptable.

Contrary to many surgeons, I do not feel that patients with an advancing stroke are surgical candidates. These patients are in a precarious state and any procedure that could decrease cerebral blood flow, further add to hypoxia, or increase intracranial pressure is definitely contraindicated. All of our present diagnostic and surgical procedures have this attendant risk. It is my personal opinion that these patients fare much better with aggressive "conservative" treatment, including carbon dioxide inhalation, anticoagulation drugs and use of the various agents available to reduce intracranial pressure, as urea, mannitol and finally steroids.

Investigation

Having selected patients which we feel are possible surgical candidates, we must then demonstrate the location and extent of the lesion. All patients with cerebral vascular disease should

not be subjected to arteriography. Many of our patients are so desperately ill that they would be a poor risk for blood count, let alone arteriography. I, therefore, do not consider angiography unless it is first decided that the patient is a possible surgical candidate. The entire cerebral vascular tree should be visualized. This should include the great vessels at their origin from the aortic arch, their course in the neck, and the intracranial pathway. The method of arteriography will vary with the experience of the investigator. Some clinicians prefer to pass a catheter into the aortic arch via the brachial or the femoral arterial route. Others prefer a direct puncture of the subclavian. Multiple direct puncture of the arteries via the percutaneous route is also adovcated. Intravenous injection with delayed serial films may also be satisfactory. In the individual patient, one or several methods may be necessary. The surgeon needs all of possible information regarding the status of the vascular system. Surgical decision will be influenced by the presence or absence of diffuse disease and certain anatomical variables. We now believe that it takes more than one artery to produce a symptomatic insufficiency. We ligate the carotid artery for other conditions with seeming impunity. We have seen asymptomatic patients, investigated for other reasons, who display occlusion of several major cerebral vessels and disease in others. The circle of Willis has been studied in autopsy specimens and it has been shown that the so-called normal exists in only 51% of the patients. Arteriographic studies in healthy volunteers have revealed a high proportion of acquired or congenital malformations in the cerebrovascular system.

After excluding, by arteriography, the patient with obviously inaccessible or non-remedial lesions, surgical technique can consist of by-pass, endarterectomy and/or patch graft. The type of surgical procedure chosen will vary with the particular patient.

In discussing the surgery of thrombosis, I have restricted my remarks to occlusive disease in the great vessels of the arch and cervical area. I might add, just in passing, that attempts have been made to endarterectomize the intracranial vessels. These have been technically successful. In the past these cases were considered inaccessible. We need considerable refinement of technique and a great deal more experience, but the future does hold promise for these previously considered hopeless cases.

The investigation of suspected thrombotic disease has also revealed hitherto unknown etiological factors. I refer to kinks, bands and spurs. These conditions are not uncommon but our experience is quite limited. Cervical osteoarthritic spurs have been proven to cause compression of the vertebral arteries. Patients with complete alleviation of symptoms following osteophyte removal have been reported. Facial bands in the neck, akin to the bands seen in a scalenus anticus syndrome, have been shown to compress the first portion of the vertebral artery. Reports of successful alleviation of symptoms following section of these bands, are now appearing in the literature. The relationship of coiling and kinking of the great vessels of the neck to the cerebral vascular symptoms remains unknown. There have been reports of disappearance of symptoms by resection and end to end anastimosis. Recent reports on local arterial sympathectomy for patients with vertebral basalar insufficiency have been encouraging. It is difficult to evaluate the results of such therapy for many of the symptoms are subjective and a controlled series is not available. Emboli in patients having valvular heart disease have been extracted from the great vessels of the neck with some success.

Summary and Conclusion

The past ten years have shown an increased interest in all aspects of cerebral vascular disease, especially in aggressive medical and surgical management. We are in the infancy of such knowledge, but I believe we are on the threshold of great advances. Therapeutic nihilism can no longer be countenanced. With proper diagnosis and utilization of present methods of surgical management, many hitherto hopeless cases can be returned to a productive and happy life. Surgical decision remains difficult, but such rewards are well worth any effort.

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Medical Management Of Stroke



Wilbur Schwartz, M.D.

Vascular disease of the brain now stands third in the causes of death in the United States. The most important means of favorably influencing the outcome of the more common severe strokes is by careful attention to problems of ventilation, nutrition and cardiovascular management. Good nursing care and rehabilitation measures will help insure maximal recovery. Surgical treatment and anticoagulants are valuable in selected cases.

TO the practicing physician, the hallmark of all forms of vascular disease of the brain is "stroke." This is clinically a focal neurological disorder which develops with a rather characteristic temporal profile, and is caused by interruption of the circulation to the appropriate area of the brain. Neurological disorders due to ischemic strokes and hemorrhage are daily problems confronting most general practitioners, internists, and neurologists. So massive is the problem of vascular disease of the brain that as a cause of death in the United States, it now stands in third place, outdistanced only by heart disease and cancer. Traditionally, its victims have been neglected by the medical profession, and relegated to isolation. The stroke patient has been shunned as though his was a type of illness undeserving of medical care. In teaching centers, residents would be enthusiastic about a hopelessly fatal brain tumor case, but a stroke patient would be neglected. Fortunately, today this picture is changing, and, as the result of the efforts of many throughout the country, these patients are receiving medical care of the highest order. The development of specific therapies makes an understanding of the clinical classification of strokes extremely important. The principal types of strokes include — cerebral infarction associated with atherosclerosis and thrombosis, cerebral embolism with infarction, and hypertensive intracerebral hemorrhage. The first of these is often preceded by attacks of transient focial cerebral ischemia without infarction. Vascular malformation, aneurysm, inflammatory disease of arteries and venous thrombosis, are less common causes of focal brain damage, sometimes included under the general term of "stroke". The differential diagnosis of these conditions from others closely resembling them, requires great care. Conditions such as brain tumor, chronic subdural hematoma, multiple sclerosis, syphilis of the nervous system,

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and hypertensive encephalopathy must be excluded. None of the classifications covers the wide spectrum of problems, the extremely variable clinical pictures, seen with ischemic or hemorrhagic stroke. At best, they involve many assumptions about pathogenesis and prognosis. In the future, we hope our knowledge will be refined by more complete natural history studies, pathological studies, arteriographic and cerebral blood flow studies. In practice, however, the diagnosis of cerebrovascular disease is established by the entire constellation of clinical features. Often the patient is elderly and arterial hypertension is present. There may be evidence of vascular disease at other sites, such as — heart, lower limbs, aorta; or the patient may have diabetes and thereby be predisposed to atherosclerosis. A source of emboli may be present (atrial fibrillation, acute myocardial infarction, subacute bacterial endocarditis). Many strokes are preceded by transient warning episodes, and these attacks, if they are nonconvulsive in nature, should always suggest thromboembolic cerebrovascular disease. The neurologic signs may occur in certain combinations having a neurovascular relationship, that is, they may depend on structures which lie within a given vascular territory, as in the lateral medullary syndrome, and thus suggest occlusive vascular disease. And last but not least, the presence of blood in the cerebral spinal fluid signifies that the process is vascular, and diagnostic deductions can proceed from that vantage point.

When the patient is seen early in the course of his illness, it is extremely difficult to generalize about the immediate prognosis. This raises a crucial question in the care of the patient with stroke. Where does the patient stand in the process when first examined? Is worsening to be expected? No rules have yet been laid down which allow one to predict the course. A mild paralysis today may become a disastrous hemiplegia tomorrow, or the patient's condition may only worsen temporarily for a day or two, and seemingly miraculous recovery may occur. Many circumstances influence the immediate prognosis, not the least of which is the familiarity of the doctor with general principles of management. I should like to discuss first the case of the critically ill patient.

There are important general principles of management in the care of the patient with acute persistent stroke with severe deficit, with or without impaired consciousness, with or without systemic complications. Ventilation is of primary importance. Pharyngeal collapse with partial expiratory obstruction interferes with adequate ventilation. If the patient is unconscious, the tongue can partially obstruct the airway. Simple plastic pharyngeal airways are helpful. Swallowing problems combined with poor cough and shallow breathing lead to respiratory complicatons unless vigorous measures are taken to prevent them. The airway must be kept open at all times. Most important is keeping the patient off his back. He must be turned from side to side frequently and the bed must be kept level. Dentures should be removed, and the head kept slightly extended. Pharyngeal suction should be used frequently. Oxygen may be necessary if arterial saturation is not adequate. If breathing is stertorous, the patient is being neglected. The patient being left on his back must force expiration against a collapsed pharynx. The resulting poor air exchange plus the Valsalva maneuver which he may be performing, repeatedly increases venous congestion and intracranial pressure. All of these aggravate his cerebral pathology and may significantly worsen his condition or contribute to his demise. If ventilation is not excellent and aspiration is a problem, a tracheotomy should be performed. This procedure should be done early, rather than as a last resort. The airway should be kept moist by an appropriate method of humidification. The danger of pneumonia is constant and one should be prepared to make proper bacteriologic studies for guidance in treatment. Antibiotic therapy, however, is indicated only by a specific need.

Control of blood pressure and cardiac management are of utmost importance. Reduction of severe hypertension to more moderate levels is essential. Hypotension should be carefully avoided; therefore, the blood pressure should be lowered with caution. Silent myocardial infarctions are associated with ischemic strokes with surprising frequency. An electrocardiogram is essential. Congestive heart failure may contribute to impaired cerebral circulation. It requires prompt identification and treatment. The venous pressure is a particularly useful test in such a situation. Cerebral embolism requires similar

care, plus the decision for conversion of auricular fibrillation, if present, and later, the decision concerning use of long term anticoagulation. If the patient is a long term chronic fibrillator, not in congestive failure, he probably should remain so. If fibrillation is of recent onset, it should be converted. We feel anticoagulants should not be used early in these cases, since many have hemorrhagic infarcts. This is the single exception to the rule that blood in the spinal fluid is unequivocal evidence that the stroke is due primarily to a hemorrhage. However, anticoagulants are of value in long term care of chronic fibrillators. There is strong evidence that the use of long term anticoagulant therapy is effective in the prevention of recurrent embolism in cases of atrial fibrillation and myocardial infarction.

If the patient is unable to swallow, he should be given fluids and nutrients parenterally for the first two or three days. If this is a long term problem, nasogastric feeding is desirable from the nutritional standpoint. Usually, severe swallowing problems require trachreotomy for optimal management of secretions. Tube feeding is a hazardous but valuable procedure. Either gravity feeding by drip or direct syringe feeding is satisfactory. The key in avoiding aspiration is to avoid gastric dilatation and overflow regurgitation. Before each feeding the gastric contents must be aspirated. If a large return is obtained the amount of the feeding must be reduced. The volume of the feeding should always be small, preferably no more than 250 ml. Parenteral supplementation is greatly preferable to the risk of regurgitation and aspiration. These precautions will greatly reduce the hazards of tube feeding. Accumulation of debris in the mouth should be avoided; corneal drying should be prevented. Skin care should be meticulous. Paralyzed extremities should not be permitted to assume any position likely to produce focal pressure on peripheral nerves. In the early phase of a stroke, urinary retention is common and catheterization may be required. An indwelling tube should be avoided, if possible, since it so often leads to infection. Brief passive range of motion exercises should be done daily.

In patients with strokes of moderate severity, bedrest is important. During the initial few hours of observation, bedrest should be absolute. If the deficit is not too severe, and his general systemic condition stable, the patient may be up at bedside or have bathroom privileges on the second day as tolerated. After 24 hours, passive range of motion exercises and calf tightening should be started. In patients with transient strokes, physical activity should be temporarily restricted. Hospitalization is often desirable since it facilitates the initial neurological evaluation. Most candidates for vascular surgery or anticoagulants will be found in this group. A general medical evaluation is most important since associated cardiovascular, pulmonary, and urinary tract problems are common and are often of great importance in the outcome. Reduction of activity during this phase may reduce any factors possibly affecting cerebral vascular compensation. However, the risks of remaining active in the early phase of these disorders appears quite small.

Several principles should be kept in mind in the general convalescent management of stroke. The patient should be on a balanced diet which keeps him on the thin side of normal weight. Low fat diets are satisfactory but their value is not proved. Moderately active exercise is desirable as may be consistent with the patient's tolerance. Physical therapy should begin early, usually by the third day. The process of retraining is intimately tied to morale. In the great majority, the outlook for the individual patient is good. However, a stroke is a personal catastrophe, even with a good recovery. An element of depression or denial is almost always present and is commonly a major factor. The stroke patient needs psychological understanding and insight, as well as practical counsel. Supportive psychotherapy, usually by the family physician, with or without antidepressant drugs, may be desirable. In evaluating long term prognosis, there are too many possibilities to recount. There is every shade of recovery. One learns to be very guarded in his predictions.

An evaluation of special therapies available is important. The underlying problem of cerebral vascular disease is atherosclerosis and there is intense interest and research today. This has led to many studies of diet, hormones, stress, blood pressure, carbohydrates, fat metabolism, anticoagulants, vascular surgery, and others. Nearly all of us who are interested in the treatment of cerebral vascular disease are in agreement on one general point — the absolute neces-

sity for controlled trials because of the variable pattern, and the uncertain natural history of the condition. Implicit in this requirement is the need for sound statistical design and analysis. Evaluation of a particular treatment program is a very large and difficult undertaking. The benefit one hopes for, must be measured by comparison with the expected disability and death rates in the general population. For the last nine years, the Los Angeles Veterans Administration Hospital and the U.C.L.A. Center for the Health Sciences, have been investigating the natural history of occlusive cerebral vascular disease and new approaches to therapy. During this time, our study group has examined over 2500 patients with strokes. At the present time, we are preparing our long term natural history data with the help of a computer. We are continuing to study new approaches to therapy. In an effort to solve the problem of adequate numbers, national cooperative studies have been undertaken. While many new problems arise in such undertakings, they provide us with our best hope for assessing specific therapeutic agents for cerebral vascular disease. Carefully designed studies with long term followup observations have been done, both by our group and many others, using anticoagulants and estrogens. Thus far there has been no apparent benefit from estrogens. In the case of anticoagulants our studies and those of many others have demonstrated that — the persistent stroke or cerebral infarction, is not benefited by anticoagulation. The risks of long term anticoagulation outweigh the possible reduction of thromboembolic complications. Marshall's randomized study in England showed no benefit with anticoagulants for the acute stroke. He used heparin and phenindione. The evidence to date indicates that anticoagulation is of some value in transient recurring strokes of the carotid system, where surgery is not indicated. Many feel that there may be some value for their use in treatment of massive basilar thrombosis, and I would agree. The use of fibrinolysin at present is not practicable, and the evidence for benefit is lacking. Stellate ganglion block does not benefit patients. This procedure has fallen into disuse since careful clinical studies failed to confirm the initial reports of its beneficial effect. Cerebral vasodilators are widely advertised and prescribed. Among these are histamine, papaverine, priscoline, nicotinic acid, alcohol, aminophyllin, and others. Unfortunately, most of these are not effective in dilating cerebral arteries. Moreover, there is no good evidence that cerebral arterial vasodilatation is beneficial to the stroke patient. Its use is based partly on the concept of counteracting vasoconstriction. The vasospastic phase in pathogenesis is probably quite transitory and relates to specific local factors which are not affected by the administration of vasodilators. No evidence is at hand to document the extent of any special benefit from the use of these drugs. Today there is considerable enthusiasm for surgical approach to certain types of strokes. However, it is our experience that only those patients who have transient strokes with the carotid artery syndrome are candidates for arteriography and vascular surgery.

Treatment of hypertensive intracerebral hemorrhage should be conservative and should follow those general principles as outlined for the severe ischemic stroke.

In summary, the single most important measure by which we may favorably influence the outcome of the more common severe strokes, is by improving their acute medical management. Careful attention to problems of ventilation, feeding, and cardiovascular and respiratory management, will be most rewarding. Good nursing care, combined with early rehabilitation measures, will insure maximum recovery. The more dramatic surgical approaches and anticoagulant therapy have their important roles in selected cases. Our best therapeutic hope lies in gaining more basic information about the pathogenesis of atherosclerosis. Perhaps then we may be able to approach more directly the disease process.

U. S. exports of medicinals and pharmaceuticals to the Sino-Soviet bloc last year amounted to $1.7 million, the U. S. Department of Commerce has reported. Drug imports from the bloc totaled only $27,000.

The Scientific Rationale of Bowel and Bladder Training



Sister Regina Elizabeth, R.N. (C.S.J.)

The following article deals with the practical aspects of the care of the hemiplegia patient as concerns the rehabilitation of the fecal and urinary incontinence. The approach is practical and shows considerable experience on the part of the writer in restoring the basic body functions to normalcy in the shortest possible time. It should be read by every physician and passed on to each nurse on the appropriate service. It should also be used as a practical reference pamphlet.

AS soon as the diagnosis of cerebrovascular accident has been established, the nurse's work begins. This is the stage of acute illness and immediate hospital admission hours and whether the patient is rational or comatose, the plan proceeds. The practice of basic rehabilitation nursing principles, teaching, and coordination are part of all care plans. The patient and his needs are the point of departure upon which all nursing care activity begins and ends. Besides the physical disabilities of neuro-muscular involvement, there may also be a hearing and vision impairment present. Psychological components are manifested by lability, lapses of memory, and poor attention span, and incontinence is frequently a complicating factor.

Research has proved that there is no physiological reason for incontinence in the patient who has been afflicted with a CVA. Much of the incontinence found in the "stroke" victim, or the hemiplegic patient is caused by emotional factors, attention-getting mechanisms, inability to make needs known, lapses of memory, and inattention. The patient has to depend on someone who has anticipated his needs and made provisions for them. The nurse can do much to control this problem by immediately initiating a definite time schedule for the patient to micturate and deficate. The past history of the patient is important; such information of former bowel and bladder control are essential. The admission interview by the RN should obtain this information from the doctor, the family and the patient, if possible, and should be recorded on the nursing care plan for twenty-four hour continuity care. The time-scheduling of the program is then based as closely as possible on the patient's normal pattern for defication and micturation.

In a bowel and bladder training program three things are necessary:

1. The patient's participation, when possible.
2. A nursing assessment.
3. A training plan.

Presented at the Symposium on Treatment of Stroke May 23, 1965, Tucson, Arizona. Sponsored by St. Mary's Hsopital, Tucson and co-sponsored by Geigy Pharmaceuticals.

Since it is known that voiding and defecating are reflex acts, with the same area of innervation to both sphincters, we will jointly discuss bowel and bladder retraining program.

The Patient's Participation

The program is always patient centered. All our thinking should be of the patient as an individual person who is a member of a family and whose family should play an active part in this program if it is possible. Address the patient by his name when speaking to him or about him. He is not "the stroke" case in 422, nor the paralyzed man who cannot talk. He is Mr. John Doe, who is now ill from a stroke, and has a resultant bowel and bladder incontinence. So at all times remember the person with all his strengths and his weaknesses as an individual human being.

Discouragement comes quickly to the adult who has a strong embarrassed, repulsive feeling about the "infantile" problem of wetting the bed, and smearing linens. A look of disgust on a nurse's face is enough to cause a person to give up. We need to prepare the individual for accidents, which are part of the learning process, praise him with success, and make him responsible for perserverance in getting the job done. Much ego support is needed throughout the whole program. An effort must be made to entice the active participation of the patient, even if he seems to be out of contact and lethargic. The patient and the nursing staff should **not** be willing, at any time, to accept incontinence. Many patients resign themselves to incontinence, because they think their physical limitations resulting from a stroke make it impossible for them to use the bedpan or toilet again. It is strongly recommended that nursing staffs **discontinue diapering** and referring to incontinent pads as "diapers." The diapering techniques have a psychological effect that encourages incontinence, because the patient soon knows that the diaper creates a permissive attiude to go ahead and wet; that it will be caught. Do everything that will encourage the development of the ego of the patient that he may soon regain self-esteem. Remember too, that the end of the bed-pan using period usually marks the all-important beginning of the patient's return to dignity, self-help and self-determination.

Training the patient to become continent again is purely good nursing care procedures, and not a medical management problem, **unless** the nurse permits it to become one. Therefore, it is the RN's professional responsibility to take the leadership in this regard, and ask the doctor not to use a foley catheter and a daily enema to control the bladder and bowel incontinence. Ask for an indwelling catheter only when you have a retention urinary problem. As a professional nurse, it is your business to know when retention exists in your patient and when it does not. If we nurses are honest with ourselves, we will admit that the reason the patient has an indwelling catheter is for our convenience and your professional dignity should blush with shame. Furthermore, when we find a method of keeping the patient dry during the acute stage of illness, we will often find that urinary control will return as soon as the patient improves. Remember too, when a catheter is inserted, we automatically increase the problem, as there is always infection present with a catheter. This will cause frequency and urgency when the catheter is removed. Thus you have in the long run made your final bladder-training problem more serious and more difficult to correct. Remember too, that daily enemas cause natural loss of tone in the colon and delay a retraining program. A daily enema order should be discouraged by the nurse, or the doctor should be asked to change the order to a nursing control program. Promote a more natural bowel retraining program by adequate hydration, diet, activity, (when possible), and suppository evacuation, with controlled timing for defecation, without smearing and discomfort.

It is good to remember too, that the patient as a person has a right to expect no unnecessary infringement on his modesty, not privacy in this matter of incontinence. See that the patient is properly screened and draped at all times. He may justly expect, as soon as his acute illness has subsided, and he is judged medically safe for activity, that he should take care of his personal hygiene in the privacy of a bathroom. Encourage the patient, as soon as he is able to transfer to a chair, to use the toilet, bathe in the bathroom or shower with help. Another factor of normalcy that enhances bladder and bowel training is to dress the patient in street clothes just as soon as they are able to do transfer techniques. This matter of being clothed makes the patient feel more like he is advancing to good

health, and restores his self-esteem as an individual, promotes his desire to be cooperative in self-help and self-directive attitudes, and independent activities of daily living. Besides these situations, there is another area promoted – self-responsibility for care of his own clothes. Most patients are more reluctant to soil their own clothes than they are hospital clothes, and when a patient begins **to care** about himself, you are on the road to greater areas of productive therapy. At night time these patients are awakened every three hours and placed on the bedside commode. It's amazing to hear their stories of how the divorcement from bedpan activation to the privacy of the bathroom, and wearing clothes motivated them strongly to desire to get well. This kind of care fosters the well-being of the total person and greatly encourages the patient to become more cooperative in his bowel and bladder training. This kind of nursing therapy is known as individualized, comprehensive and continued nursing care, and is the very essence of good team nursing, when the personal needs of the individual patient are fostered through promotion of every opportunity to increase his self-esteem, self-help and self-determination.

The Nursing Assessment

The role of the nurse is threefold: 1) to promote high quality nursing care; 2) to teach the patient and the family; 3) to co-ordinate all the health-team members' activities and communicate to them the patient's level of function and behavior on the ward.

The nursing assessment can be made only if based on essential information. **The physician's diagnosis of the illness** and the effect it may have on bowel and bladder control and training must be known. The past history of the patient is important; such history as **normal bowel and bladder habits** when well, and the time of **onset of incontinence.** This history, as stated before, can be obtained from the professional RN interview with the patient, from the doctor and the family, depending upon the acuity of illness of the patient at admission hours. An ongoing analysis of the pattern of incontinence and fluid intake helps the nursing staff work with the patient and the problem as it exists in him. Every patient has his own patterns of elimination. Usually the patient with the bladder incontinence voids large amounts at intervals. The frequent voiding of small amounts suggests insufficient fluids, bladder infection or retention with overflow. Continued dribbling could mean retention with overflow or lack of sphincter control. Notify the doctor at once. In bowel training, small, frequent, soft or loose stools are most often caused by impaction of hard, fecal material in the lower part of the bowel. Nursing personnel (RN) should be taught to examine the rectum and palpate the adbdomen when they suspect impacted stool or a distended bladder.

An assessment of the patient's ability to sit up (in bed, on a commode, or on the toilet), stand, walk, feed himself, reach for water, call the nurse, and so forth, is also essential. Finally, knowledge of the normal anatomy and physiology of the bladder and bowel, is essential in making a total nursing assessment.

The Training Plan

The charge nurse should alert the doctor of the program, but since it is strictly nursing care, a written order does not need to be completed. Be sure the plan used is understood completely by all personnel on all three shifts. **Continuity of nursing care** is obtained by written communications on the individual patient's nursing care plan and this is used as a communication verbal guide to inform the oncoming shift of nursing personnel.

Lack of sufficient fluids is the biggest detriment in bladder and bowel retraining. 2500 to 3000 cc is necessary to prevent infections, objectional odors, and rectal or high sigmoid impactions. It is important that the nurse in the early stage of the illness obtain the patient and the family cooperation in this area and teach them the reason for adequate fluid intake in illness and health. Water is the best liquid. Citrus fruits are only allowed in small amounts because they change to a base in the body and lead to formation of stones and crusting of the catheter, if one is in use. When citrus fruit or milk is given, follow it with a large amount of water. **Cranberry juice** is encouraged because it is highly beneficial in keeping the urine acid closer to normal urine ph level. Give 4 oz. t.i.d. at medication time (more psycho effect).

Increasing physical activity is important. All acutely ill patients are turned every two hours. Range of motion exercises is given t. i. d. daily post 24 hr. for C.V.A. patients unless the doctor orders otherwise. You do not need an order for R.O.M. This is just good nursing care and not a

doctor's order. As the muscle tone improves in the large muscles of the body, so too will the smaller organic and sphincter muscles improve. Ask for orders, to mobilize the patient as soon as acute illness stage is over.

Positioning is very important. As soon as the patient's condition warrants it, place the patient in a semi-squat position for all toilet needs so that the normal anatomical forces of gravity can be brought into use by bearing down with the abdominal musculature to put additional pressure on the bladder and the bowel to assist in the evacuation reflex. If the patient cannot be gotten out of bed, but can sit up, he should be placed on the bed pan while sitting on the side of the bed with his feet resting in the seat of a chair. The patient is more successful if he can lean forward and move his trunk in some manner or other, for this sets off a multitude of skin sensory stretch receptors at the spinal cord level to fire a motor cord bladder response; likewise, all environmental habitual associated conditions the patient is used to should be used—like smoking, reading the paper, radio playing, putting up hair, writing, etc., are part of his normal environmental conditional response at the time of toilet hygiene.

Bowel Retraining Program

As soon as the patient is admitted, obtain information from the patient or family, when he had his last bowel movement, what his usual habits are, and home association familiar to his own personal needs. Obtain orders from the doctor to do a rectal exam to make sure no impaction exists, and obtain orders for an oil enema to remove impaction if it does exist.

Try to obtain a medical order for Dulcolax Suppositories daily p.r.n. and Glycerine Suppositories daily p.r.n. First 24 hours post C.V.A. in early A.M. insert a dulcolax suppository. Place the patient on his left side with right thigh flexed, insert suppository up through internal sphincter, past the Houston intermediary valve, rotate the suppository laterally, down to the left side and make it contact the rectal wall so that it lies against the wall and sits on the valve. This distance will be the full length of your index finger and approximately 3-4 inches. It is in this area where the suppository is the most beneficial in stimulating the defecation reflex.

If the patient is alert, instruct him not to strain for thirty minutes, or until he has a desire to defecate, and then place him on the bed pan.

Dulcolax Suppository is preferred because its particular mode of action is as close to natural defecation as possible. When the suppository contacts the rectal mucosa, the heat of the body melts the suppository and pressure of the contact, plus the thermal charge at the time of decomposition, stimulates the exteroceptor sensory nerve fibers of the intestinal mucosa and submucosa, known as the Meissner's plexes, which sends the impulse to the reflex arc of the spinal cord ventral horns at S2 and S4 and is reflexed back thru the motor fibers of the propriceptors Anrebach's plexus firing off the muscle stretch receptors of the rectum and colon. The contraction of the colon initiates mass peristalsis, moving the feces across the colon to the terminal portion of the pelvic colon and rectum. The feces then distend the rectum and pressure on mucosa of rectum gives rise to a natural urge to defecate.

Always insert suppository about 20 minutes prior to meal so you will have the additional aid of gastro-colic reflex, which is triggered off by entrance of food in the stomach that initiates mass peristalsis, moving feces toward sigmoid colon. After about the second to the fifth day, the patient gradually becomes aware of approaching desire to defecate and usually a glycerine suppository is all the stimulus needed. On the third day to the eighth day (sometimes sooner and sometimes later) the patient recognizes the desire to defecate and does not need a suppository. Be sure he takes at least two cups of hot liquid and a cup of orange juice for daily breakfast, when possible. The amount of hot liquid, plus the laxative stimulation of the orange juice is now all that is needed to strongly stimulate the gastric-colic reflex and assist in establishing daily myogenic timed response for defecation reflex. Comatose, confused or non-attentive patients are placed on the bedpan thirty minutes post insertion of suppository and feces are caught without linen smearing or embarrassment to the patient, in time, a week or two more weeks with brush and ice stimulation even the comatose patient can be trained to bowel control without suppository stimulation. If AM suppository does not work, insert the second one before lunch. Also, assist patient with gentle massage of downward pressure over the descending colon area of the abdomen. Sensory stimulation of brushing and

icing are usually most effective immediately after meals at times of mass peristalsis and gastric-colonic reflex. (Stimulation for voiding at all other times rarely triggers off the defecation reflex). The nurse should remember that a pint of enema has been seen to raise the systolic pressure as much as 20-60 points in many hypertensive (as well as others) patients, while the patient is systemically experiencing the stress of colonic cramps.

Bladder Retraining Program

As soon as the patient is placed on a retraining program, establish an accurate ongoing intake record, showing the day, hour, time, fluids received (oral, I.V., sub-q) as well as recorded output of voluntary urination, incontinent (large, small or cc's) and the consistency and amount of stools. Place the patient on the bedpan every two hours while he is awake, and every three hours during the hours of sleep. The next day observe the past 24 hour record. You can detect the pattern the patient is forming as to time (near the hour or half hour), frequency, and amount. Notice the longest span of hours between voidings. Try to push fluids during waking hours from seven to seven more vigorously. The second day pan the patient on the every two hours of even or odd, hour or half hour that is closest to the patient's own timing (1 to 3, or 1:30 to 3:30 or 2 to 4, etc.) Pan him twenty minutes before his scheduled time of wetting the day before and leave him on the pan fifteen minutes using all your stimulation techniques to assist him. A regulated time for panning sets up a conditioned time reflex in assisting the voiding reflex to trigger off.

If the incontinent patient is a male, place a plastic urinal over the penis to assist in catching the urine. Tell the patient and family what you are doing and why. The plastic urinal may be made from a shower cap, an icebox cover, or a piece of plastic with an elastic circumference of 1½ to 2 inches opening. Place two abdominal pads inside of it to catch the urine. Depth of bag should be at least 6 inches and hold at least 300 cc. The bag should not make contact with the skin. It should be checked hourly, emptied and measured. The incontinent female patient may use abdominal pads held in place by a sanitary belt and covered with a piece of plastic.

Every two hours place the urinal, or place the patient on the bedpan. Try to obtain the patient's attention and tell him regardless of lack of attention) to think about emptying his bladder. Place his own strong hand over his bladder area, then place your hand on top of his. Now ask the patient to bear down and make his bladder firm under your hands. (This skin contact of hands assists the patient in centering his attention on what he is trying to do.) If the patient has not voided, then pour ice water over the genitalia; this thermal stimuli causes a reflex contraction of the bladder muscle and often initiates voiding reflex. Other sensory stimulations will be discussed more completely in a few minutes. Each time you place the patient on the bedpan, continue to use this same stimulation, and finally, (sometimes 24 hours, 72 hours, or more) the reflex arc will be conditioned, and you will meet with success as the patient begins to recognize the desire to void again. If the patient is comatose, the reflex arc will trigger off on a scheduled time pattern with or without the stimulus.

In England, spinal cord injury patients receive a Foley Catheter on hospital admission. Sensory stimulation techniques of brushing and icing are started every four hours, so at the end of the spinal cord shock, approximately two weeks, the catheter is removed and habitual reflex voiding is initiated immediately, with continued sensory stimulation, administered four times in every twenty-four hours. Retention urine, upon catheterization after emptying of bladder by brushing and icing, produces only two ounces retention in these cord injury patients.

The brush used is a bar mixer. The metal blade is removed from the mixer and a Number Ten French quill paint brush is inserted in the head of the mixer. Energy is supplied by one dry cell battery installed in the handle of the mixer. The abdominal skin overlying the external oblique muscles, bilaterally, is the area of innervation for brushing and icing of S2 and S4 spinal nerves. Fast brushing (that is, five revolutions per second for ten strokes) will activate the free nerve network, and the oscillating or augmenting recruiting system. Cold ice should be applied, as in brushing; several rapid, light applications, lasting three to five seconds for a repeated total application, equivalent to the total of thirty seconds, before it is facilitory to the muscle spindles to lower the threshold for firing off the stretch receptors. The test of activation from cold is

hyperemia, which will be secured in thirty seconds. The free network of small fibers activate slowly. Thirty seconds are required before there is initiation of the motor outflow to the spindle, as this is the time required for hormonal secretion to build up in the pyramidal tract. Now this is the basis and one of the principles of sensory stimulation techniques. When this has occurred there is a peaking, thirty to forty minutes after the stimulus is withdrawn. By occurrence I mean, when hormonal secretion has been built up in the extra pyramidal tract. This means that the hormonal secretion is available within the body of the patient for his use after discontinuing brushing or the icing for some thirty or forty minutes. Each day following, the reaction will come sooner and the period of continuance will be longer. This is important. It is apparent that the effect builds up energy in an oscillating system of the reflex arc of the spinal level of the cord and the stretch receptor of the muscle. As the current increases, the intensity increases and the duration is longer. Each day there will be a greater stretch of time. This sets up a sort of habitual activity, or if you would, a conditioned reflex is established which does not require cortical control.

Many of the sensory stimulation techniques appear to be clearly in the realm of physical therapist and speech therapist and require a type of skill which the nurse is not expected to possess; however, there are a multitude of others that can be validated as an essential part of nursing care and which have been used successfully by the author in nursing intervention for patients with such problems as bladder and bowel control, drooling, incorrect posture, excitation, emotional liability, vocal cord weakness, respiratory distress, inability to cough, and many other procedures besides.

It is imperative that the professional nurse in the general hospital should realize that the concepts of nursing care found in a rehabilitation center should *begin* in the general hospital. Preventive, compensatory and restorative nursing care should begin at the moment of the patient's admission to the bed! Early care is the key to successful rehabilitation of all long-term illness patients. Delay may be responsible for complete or partial loss of joint motion, shortening and wasting of muscles, brittleness of bones due to immobility and proper positioning; bed sores, edema, loss of bowel and bladder control, anxiety, depression and general loss of strength. Procedures to prevent deformities and other complications should be *routinely* used and early activity should begin as soon as the acute stage has subsided. Few patients need become helpless, deformed and bedridden. An early aggressive program of *teaching the patient and his family* to maximize his potentials and minimize his disabilities will prevent many patients from reaching a severely disabled stage of dependency. Saving human life is not enough, if the patient has acquired *needless* disability. The medical-nursing profession has a joint major responsibility, not only to save human life, *but* also to help provide meaning for that life, even if it is a handicapped one, it still can be a *whole*-some one!

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Phenylbutazone has not replaced physiotherapy, x-ray treatment, or local injections of hydrocortisone in the more chronic conditions, but it may advantageously be combined with these measures.

Contraindications
Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. Because of the increased possibility of toxic reactions, the drug should not be given when the patient is senile, or when other potent chemotherapeutic agents are given concurrently. Large doses of Butazolidin alka are contraindicated in patients with glaucoma.

Precautions
Before prescribing, the physician should obtain a detailed history and perform a complete physical and laboratory examination, including a blood count. The patient should be kept under close supervision and should be warned to report immediately fever, sore throat, or mouth lesions (symptoms of blood dyscrasia); sudden weight gain (water retention); skin reactions; black or tarry stools. Regular blood counts should be made. The drug should be used with greater care in the elderly.

Warning
If coumarin-type anticoagulants are given simultaneously, the physician should watch for excessive increase in prothrombin time. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

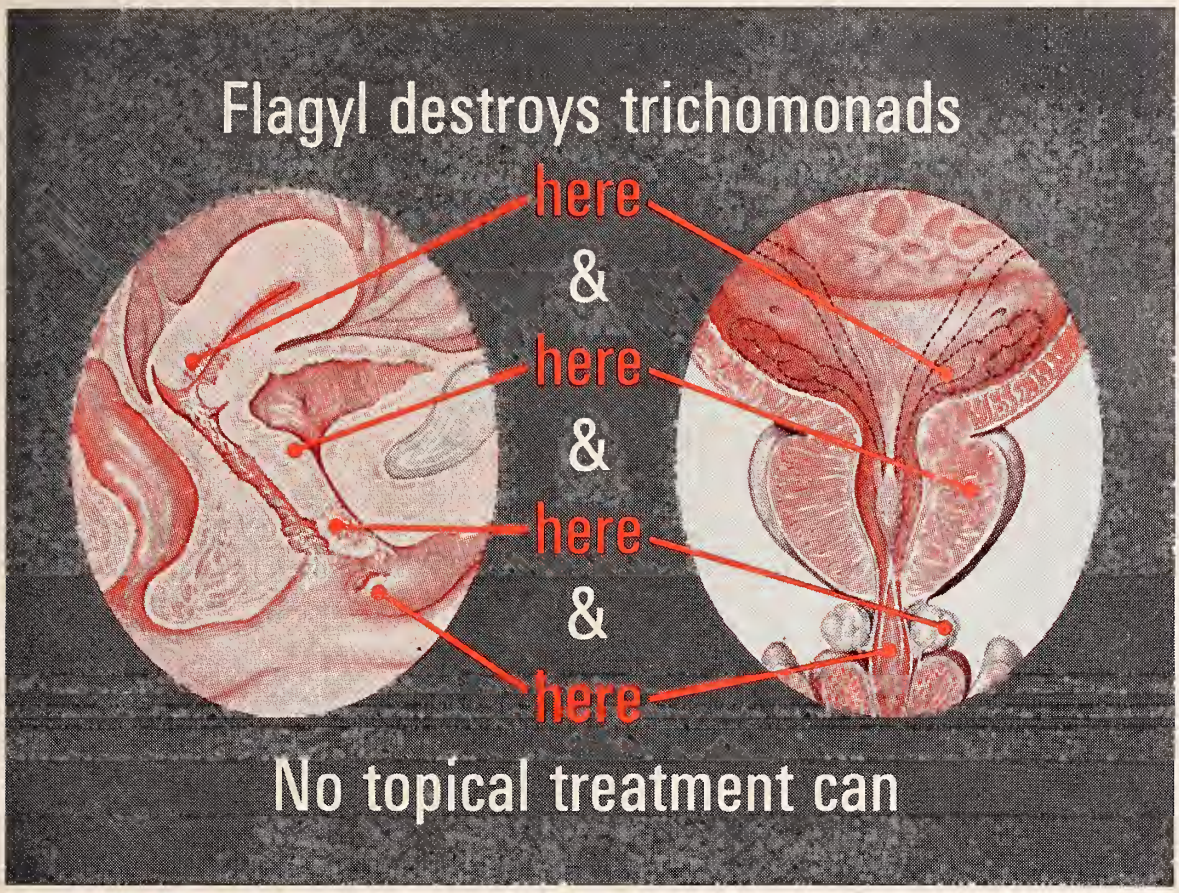
Adverse Reactions
The most common adverse reactions are nausea, edema and drug rash. The drug may reactivate a latent peptic ulcer. Infrequently, agranulocytosis, generalized allergic reaction, stomatitis, salivary gland enlargement, vertigo and languor may occur. Leukemia and leukemoid reactions have been reported but cannot definitely be attributed to the drug. Thrombocytopenic purpura and aplastic anemia are also possible side effects. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hepatitis, jaundice, and several cases of anuria and hematuria. With long-term use, reversible thyroid hyperplasia ma infrequently.

Average Dosage
Initially, give 400 mg. daily (one ca q.i.d), reducing this, if possible, w favorable therapeutic effect has be obtained. If after one week there h no response, discontinue the drug zolidin alka contains antacids and spasmodic to minimize gastric up

Note: The physician should be fu of dosage, precautions, adverse r and contraindications as containe complete prescribing information

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The introduction of Flagyl removed these deficiencies. Hundreds of published investigations in thousands of patients have confirmed the ability of Flagyl to cure trichomoniasis.

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Nothing cures trichomoniasis like Flagyl.

Dosage and Administration

In *women:* one 250-mg. oral tablet t.i.d. for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When the inserts are used one vaginal insert should be placed high in the vaginal vault each day for ten days, and concurrently two oral tablets should be taken daily.

In *men:* in whom trichomonads have been demonstrated, one 250-mg. oral tablet b.i.d. for ten days.

Contraindications

Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precautions and Side Effects

Complete blood cell counts should be made before and after therapy, especially if a second course is necessary.

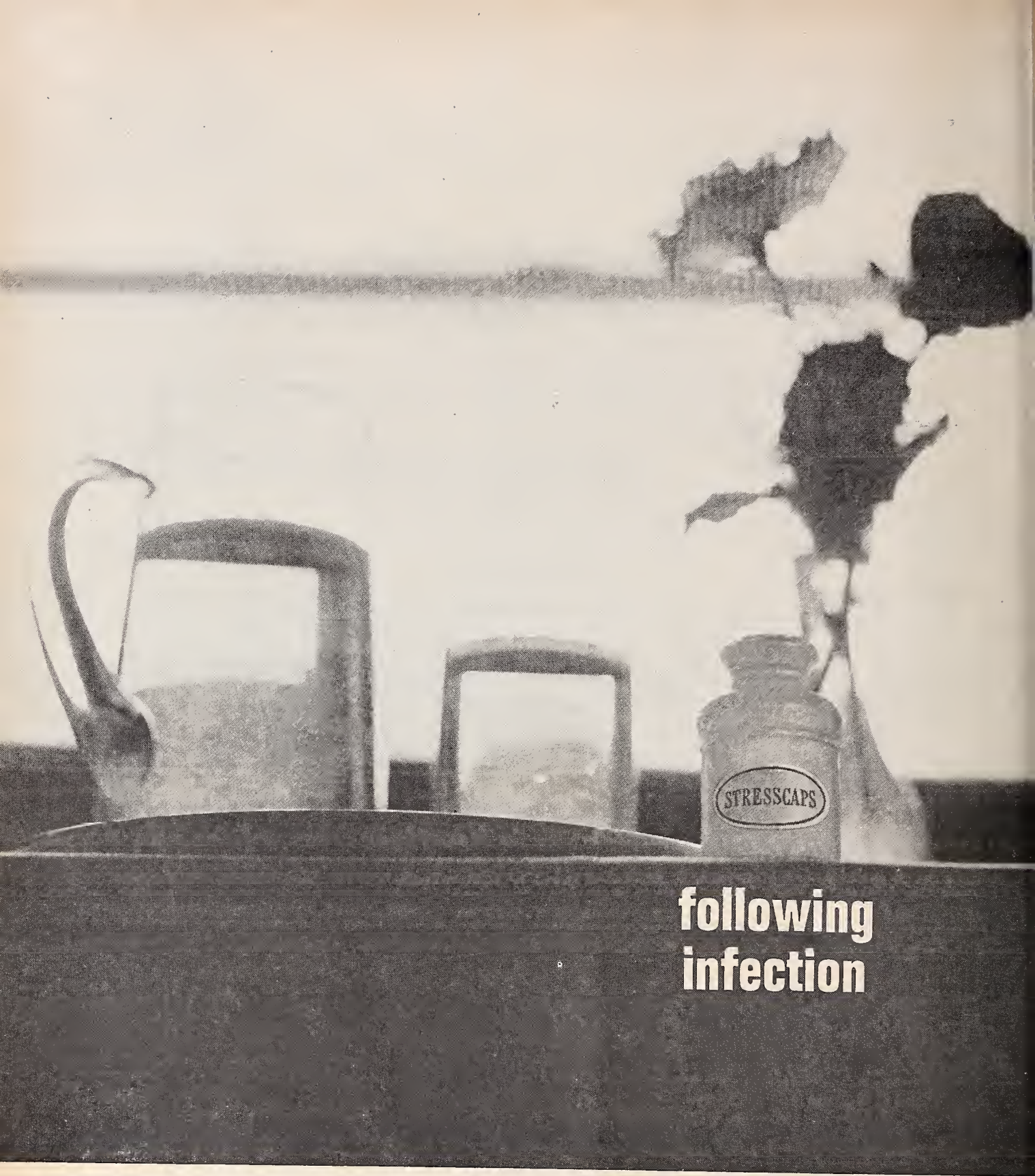
Infrequent and minor side effects include: nausea, unpleasant taste, furry tongue, headache, darkened urine, diarrhea, dizziness, dryness of mouth or vagina, skin rash, dysuria, depression, insomnia, edema. Elimination of trichomonads may aggravate moniliasis.

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Arizona's Planning Team: Personnel

Earlier, we discussed the planning machinery which has been invoked elsewhere for the purpose of developing new medical schools. In some instances, responsibility has rested with a single individual literally up to the time the doors of the first building were opened. The University of Florida College of Medicine at Gainesville was started this way and the new Milton S. Hershey Medical Center (a division of Penn State University) is being developed in the same manner. In contrast to this, other medical schools have been organized by a planning "team," sometimes constituted with considerable breadth. For example, the University of Kentucky College of Medicine at Lexington was developed by a group of five men including a medical statistician, a sociologist, a financial officer and two physicians.

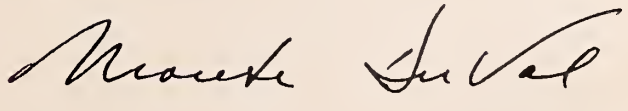
In Arizona, we plan to develop our medical school using a team of three men: two physicians and one medical scientist. One of the physicians is serving as Dean. Of course, we also have a librarian. Since this team has now been assembled, and since it will have a far-reaching influence on medical education in our state for quite some time, its members deserve an introduction in some depth.

The first member to arrive after the dean was Philip H. Krutzsch. Phil was born in St. Louis, Missouri in 1919 but moved to San Diego soon afterwards where he was educated through college. In 1948 he received a Master's degree at the University of California and in 1953 he earned his Ph.D. in Zoology at the University of Kansas. Throughout a substantial portion of his educational years Phil was a football player of great ability and, once you have seen him, you will see why; physically, he is a large and powerful man. He is married and has two children, one of whom this year entered the freshman class at Kansas University.

Phil's academic career began when he left the University of Kansas to take up the duties of Instructor in the Department of Anatomy at the University of Pittsburgh School of Medicine in 1953. Two years later he transferred his activities to the Department of Anatomy at Southwestern School of Medicine (University of Texas) in Dallas. Here, he also taught anatomy until he returned to the University of Pittsburgh in 1960 as an Associate Professor. Throughout this portion of his teaching career, he was engaged in some particularly interesting research having to do with the behavior and biology of Chiroptera. Recently, his efforts have been focused on the pathogenicity of rabies and on the biochemistry and physiology of the reproductive cycles in these same animals. He is a member of many professional organizations, including the American Society of Mammalogists, the American Society of Zoology and the American Association of Anatomists.

It is of critical importance to us that, during the five years before he came to Arizona, Phil also served the University of Pittsburgh as Associate Dean for the basic medical sciences. In this capacity he had responsibility for student and academic programs related to the first two years of the medical school curriculum. He quickly earned a fine reputation for his effectiveness in helping medical students solve their many problems, and for his tactful participation with other faculty members in the administration of the affairs of the school as a whole. His work merited him a position on such important academic committees as Curriculum, Admissions, Scholarship and Loan, and the Faculty Executive Committee.

Phil's value to our planning team should already be evident. First, he has the principal responsibility for designing the entire basic science buildings because of his unique past experience in representing, to the administration, all of the basic sciences rather than just his own discipline. In addition, he will help to define the program and objectives of the school and translate them into a workable curriculum. He is eminently qualified for these tasks and we feel very fortunate that we have him with us.





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Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its anti-anxiety and muscle-relaxant properties.

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Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of pre-existing symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

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Eight out of 10 patients respond

In clinical trials, Eutron produced normotension or a significant reduction in blood pressure in eight out of 10 patients studied. The rationale for the product is this: Eutonyl used alone is a potent antihypertensive. Its antihypertensive action is markedly enhanced by Enduron, a potassium-sparing thiazide.[1,2,3] The combination (Eutron) thus produces greater antihypertensive effect with lower dosages of the Eutonyl component, and milder side effects may be seen.

512214

1. Torosdag, S., Schvartz, N., Fletcher, L., Fertig, H., Schwartz, M. S., Quan, R. F. B., and Bryant, J. M., Pargyline Hydrochloride as an Antihypertensive Agent With and Without A Thiazide, Am. J. Cardiol., 12:822, Dec., 1963.

2. Pollack, P. J., Pargyline Hydrochloride and Methyclothiazide Combined In The Treatment of Hypertension, Cur. Thera. Res., 7:10, Jan., 1965.

3. Bryant, J. M. et al., Antihypertensive Properties of Pargyline Hydrochloride, New Non-Hydrazine Monoamine Oxidase Inhibitor Compared with Sulphonamide Diuretics, J.A.M.A., 178, 406, Oct., 1961.



BP reductions in the recumbent and sitting positions often are nearly as great as in the standing. In clinical trials, the average *recumbent* BP reduction was 36/18 mm. Hg.



The average *standing* reduction in clinical trials was 45/22 mm. Hg. Thus the difference between the standing and recumbent readings was only 9/4 mm. Hg.

Significantly lowers blood pressure in all body positions; less likelihood of orthostatic hypotension

In clinical trials, the average reduction in standing blood pressure was 45/22 mm. Hg.; in the sitting position it was 48/20 mm. Hg.; and in the recumbent position, 36/18 mm. Hg.

Because Eutron effectively reduces blood pressure in all body positions, there is reduced likelihood of orthostatic symptoms or hypotension.

This was reflected in the relatively mild character of side effects seen in clinical trials (see below).

Smooth and gradual onset

Onset of antihypertensive action is usually quite smooth. Initial reduction of systolic and diastolic readings is usually seen within a week — maximum reduction in seven to ten days.



Less troublesome side effects may be seen; frequent improvement in "sense of well-being"

Fewer than 1% of patients studied discontinued Eutron therapy because of side effects. This is due in part to the relatively low dosage needed with the combination. Usual recommended dose is one tablet daily—that is, 25 mg. Eutonyl with 5 mg. Enduron. *This is about half the usual therapeutic dose of Eutonyl given alone.* As a consequence side effects may be milder. And, as with Eutonyl given alone, the patient may well note an increased sense of well being. This is in distinct contrast to most other antihypertensive therapy.

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Prescribing information for EUTRON

INDICATIONS: Eutron (pargyline hydrochloride and methyclothiazide) is indicated in the treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. It is not recommended for use in patients with mild or labile hypertension amenable to therapy with sedatives and/or thiazide diuretics alone.

CONTRAINDICATIONS: Eutron is contraindicated in patients with pheochromocytoma, advanced renal disease, paranoid schizophrenia and hyperthyroidism. Until further experience is gained it cannot be recommended for use in patients with malignant hypertension, children (under 12 years of age), or pregnant patients.

The concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. A drug-free interval of two weeks should separate therapy and use of these agents.

WARNINGS: Pargyline hydrochloride is a monoamine oxidase inhibitor. Patients should be warned against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When it is necessary to administer alcohol, narcotics (notably meperidine), antihistamines, anesthetics, barbiturates and other hypnotics, sedatives, tranquilizers, or caffeine, these agents can be used cautiously at a dosage of ¼ to ⅕ the usual amount. Avoid parenteral administration where possible. Withdraw pargyline two weeks before elective surgery.

Patients should be warned about the possibility of postural orthostatic hypotension. Those with angina or other evidence of coronary disease should not increase physical activity. Pargyline may lower blood sugar. Potassium depletion is unlikely at the recommended dosage, but if it occurs, adjust dosage or withdraw or provide added natural food sources of potassium; potassium tablets should be avoided wherever possible, as bleeding or obstructive ulceration of the small bowel has been associated with their use; potassium levels should be especially watched if the patient is on digitalis or steroids, or if hepatic coma is impending.

PRECAUTIONS: When determining the antihypertensive effect of Eutron, blood pressure should be measured while the patient is *standing*. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Pargyline has not been shown to cause damage to body organs or systems. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. The drug should be used with caution in patients with liver dysfunction. With prolonged therapy, examine patients for change in color perception, visual fields, and fundi.

Elevated blood urea nitrogen, serum uric acid or blood sugar are possibilities attributable to the methyclothiazide in Eutron. Methyclothiazide may also reduce arterial response to pressor amines. Blood dyscrasias, including thrombocytopemia with purpura, agranulocytosis and aplastic anemia, have been seen with thiazide drugs.

SIDE EFFECTS: The use of pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extra-pyramidal symptoms have been reported. Drug fever is extremely rare. Congestive heart failure has been reported in a few patients with reduced cardiac reserve. Nocturia has been observed with the combination. If side effects persist, despite symptomatic therapy or reduction of the dose, discontinue the drug.

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A.M.W.A.

The American Medical Writers' Association recently celebrated its twenty-fifth anniversary. As a society it has grown steadily but is still unfamiliar to many authors who write for more than fourteen thousand journals in the biomedical field. This year's Silver Anniversary meeting of A.M.W.A. covered topics from reasons for poor medical writing to the influence of television and computers on medical communication.

The semi-monthly *Bulletin* includes articles such as "Pageantry of the English Language," and "Writing Good Humor is No Fun."

Membership in A.M.W.A. entitles an author to a medical manuscript editing service which actively assists both the occasional writer and the regular contributor.

The society has been described by some as "a group of doctors who want to be writers, and a group of writers who want to be doctors." Whether this definition contains a grain of truth or not, I am not prepared to say. However, I do urge anyone interested in medical writing to join this organization of congenial men and women dedicated to the cause of improving all phases of medical communications.

Robert F. Lorenzen, M.D.
Editor

ARIZONA MEDICINE

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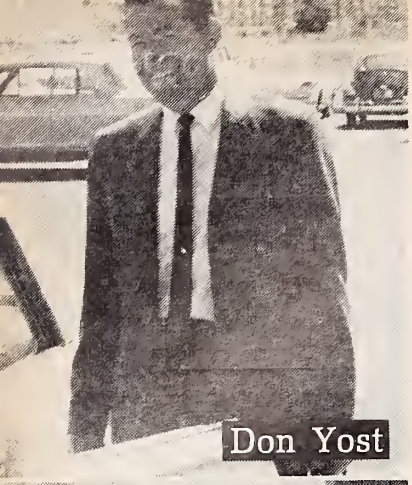
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The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

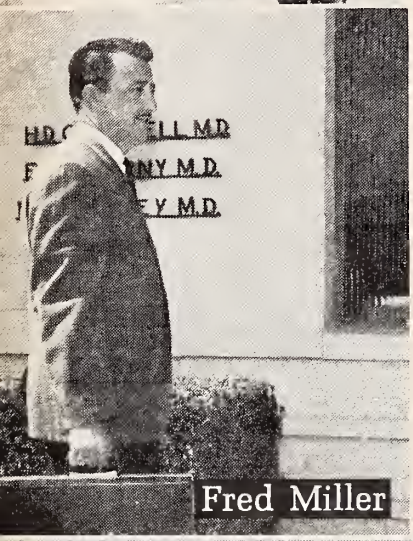
Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.
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December 8, 1965

Robert F. Lorenzen, M.D.
Editor, Arizona Medicine
P. O. Box 128
Scottsdale, Arizona

Dear Dr. Lorenzen:

I read with interest your comments on medical communication which appeared in the November issue of Arizona Medicine. It is a coincidence that your article appeared at a time when the Social Disability Program has been struggling with the problem of communication between treating physicians and the State agencies which are working with the Social Security Administration in making disability decisions for Social Security. Those of us who are working in this area feel very keenly that well-organized, completely documented medical communication between treating physicians and this agency or any agency dealing with disability determinations would facilitate the ease with which the decisions can be made and this would affect a saving in money and energies as well as being of great service to our patients by eliminating additional correspondence and often consultative examinations.

Since the beginning of the disability program under Social Security, several types of medical forms have been put in use and the physicians in the State of Arizona have been most cooperative in filling out these forms; however, it is now generally felt that the old-style questionnaire form is not too well suited for communicating the information that we find so vital in this program and for that reason a new narrative report form has been devised and will be placed in circulation this month. Studies in six States support the position that the narrative-type report form is better suited for physician use in that it more closely approximates the reporting format that most physicians use in their day-to-day communications between each other and also in completing hospital records.

It is my feeling that generally speaking the treating physician can provide all the medical evidence needed for reaching an equitable decision in most disability claims and that it is only a matter of communicating this information to the reviewing physicians in a manner in which the reviewing physician can draw the same conclusions reached by the treating physician. Along with the use of this new medical form, the State Agency plans to use telephone contacts between agency physicians and treating physicians more extensively since studies have indicated that this type of communication is often very rewarding both in convenience to the treating physician and the time saved in processing claims. Your article was quite timely and I am sure well received and it is my hope that the subject of medical communication will be given the consideration that it needs.

Sincerely yours,
Samuel H. Hale, M.D.
Chief Medical Consultant
Disability Certification Section-VR
Division of Vocational Rehabilitation

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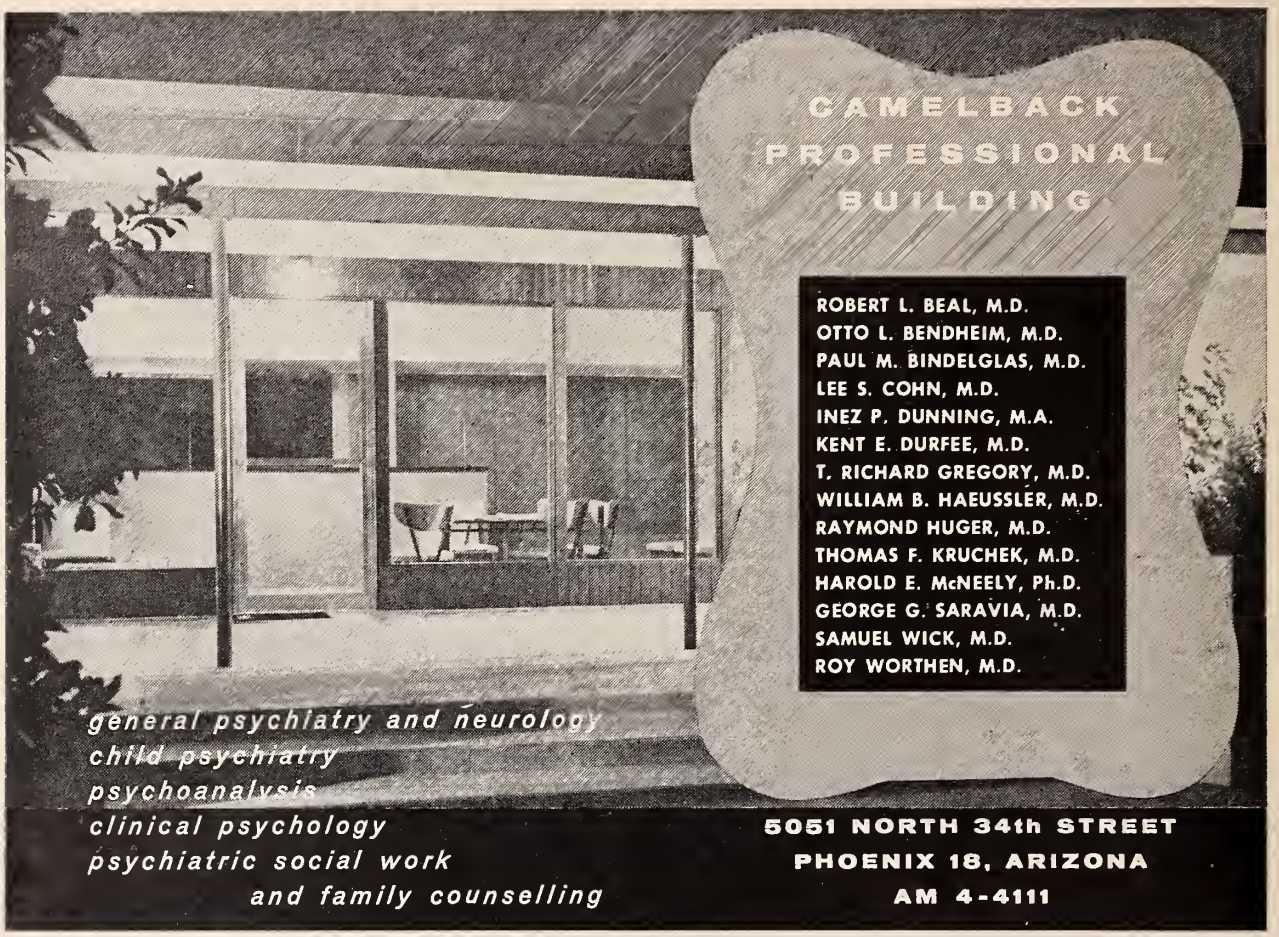
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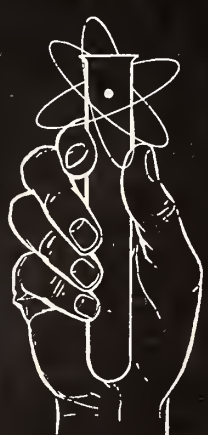
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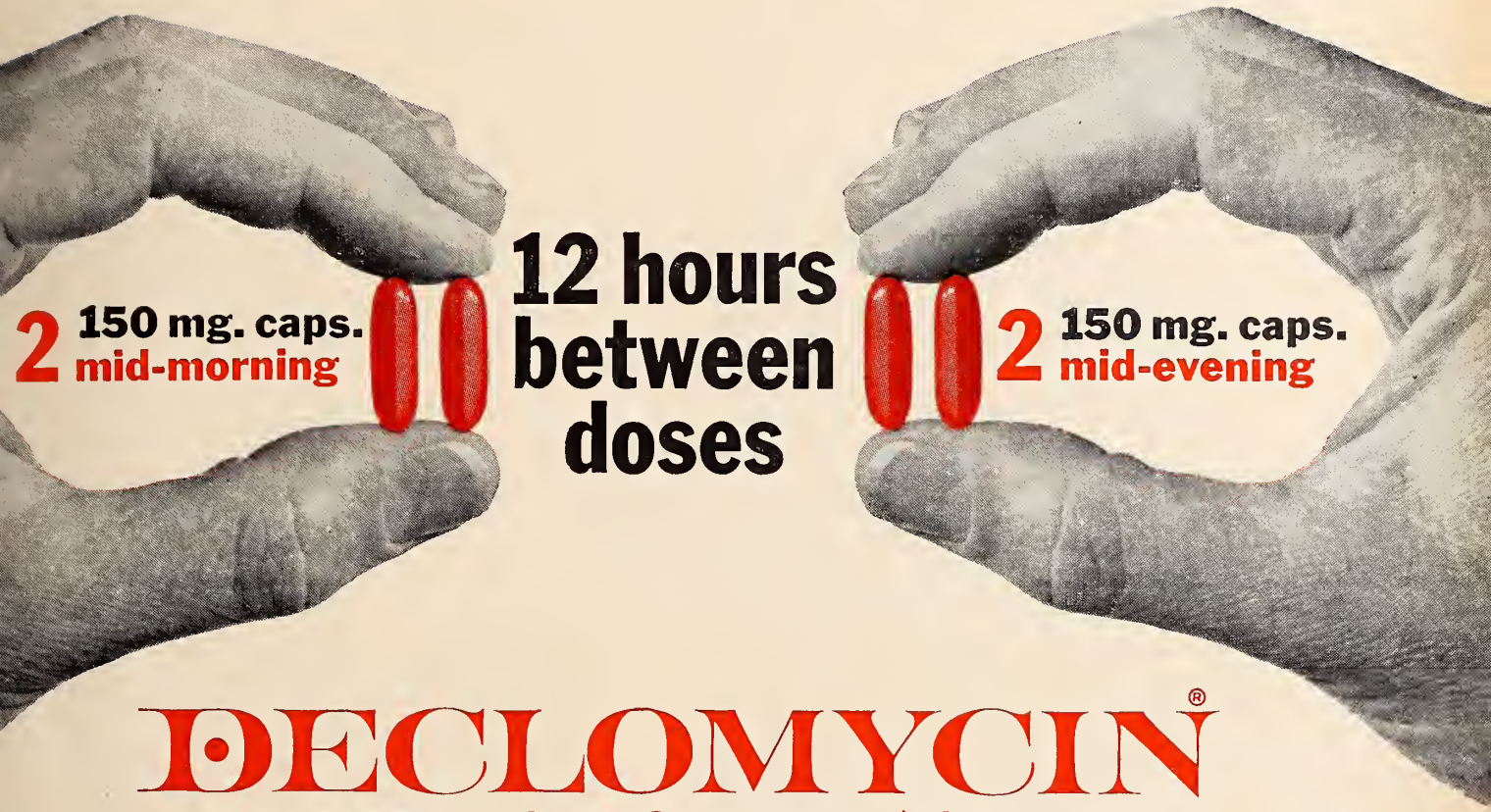
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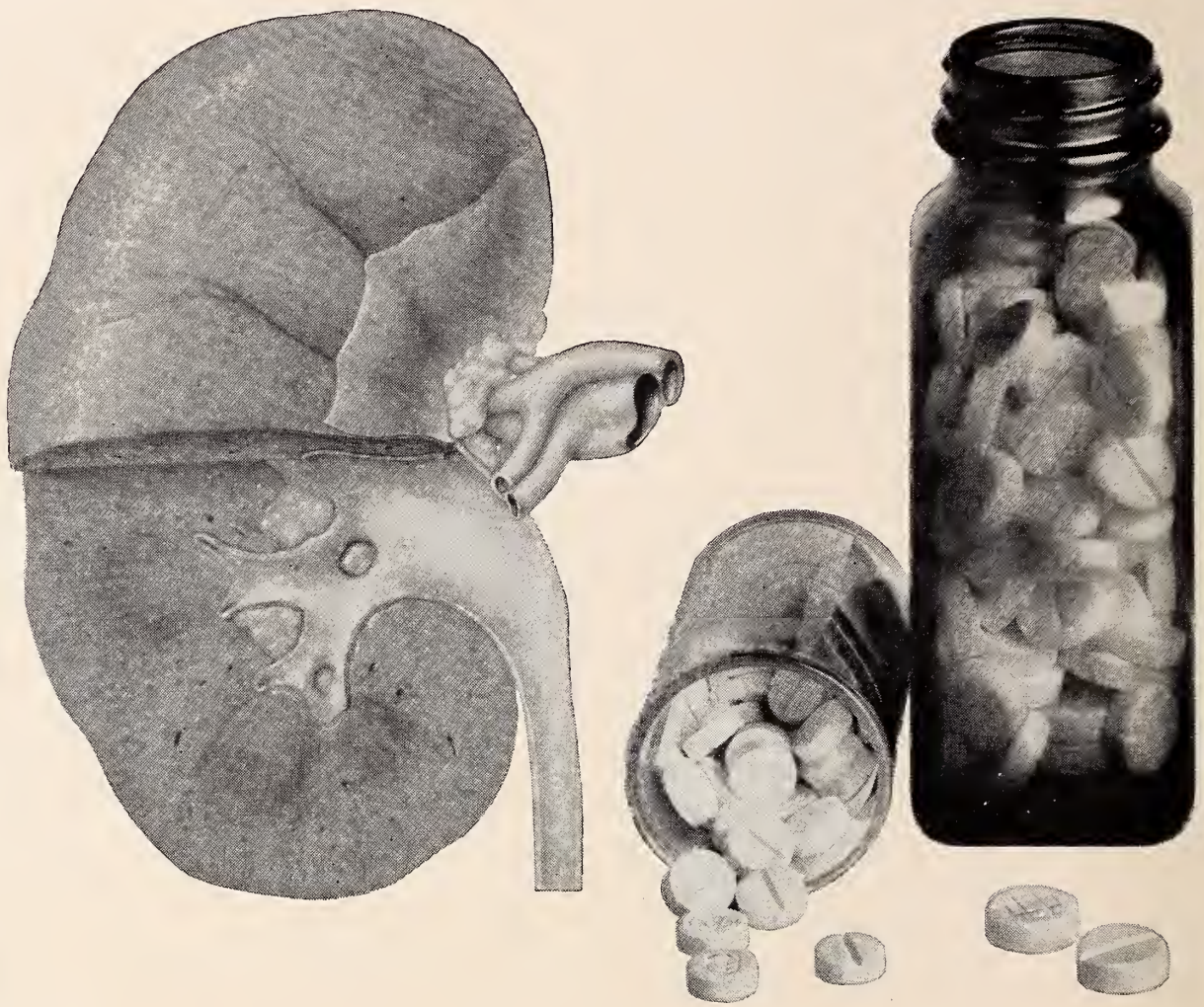
Side Effects typical of tetracyclines which may occur: glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis, dermatitis, overgrowth of nonsusceptible organisms. Also: photodynamic reaction (making avoidance of direct sunlight advisable) and, very rarely, anaphylactoid reaction. Reduce dosage in impaired renal function. The possibility of tooth discoloration during development should be considered in administering any tetracycline in the last trimester of pregnancy, in the neonatal period, and in early childhood. Increased intracranial pressure in infants, reversible upon discontinuation of dosage, is a remote possibility.

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The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

• Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.

• From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

MSD MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

where today's theory is tomorrow's therapy

PHYSICIAN INFORMS PATIENTS HE WILL NOT BOW TO MEDICARE

Open Letter to My Patients and Addendum to the American People
Editor, The Arizona Republic

Because of the recent unconstitutional invasion of my profession through the passage of the Medicare bill, I find it necessary to make the following statement:

I will continue to care for you as a private patient as I always have providing this continues to be mutually agreeable.

I will expect you to pay for my services as you have always been expected to do. If you are unable to pay at any time tell me and I will probably treat you as is my custom.

Any type of government medicine is socialized medicine and is bad for you and for me because it will prevent me from doing for you what you and I decide is best for you. I will not participate in any type of government fees whether it be from city, county, state or federal government directly or indirectly.

If you need to go to the hospital I will admit you in the same manner as I have always done but if the hospital refuses your admittance because it requires I sign a government form or requires I agree to government control (which I will not do) it may be necessary for you to find a physician who practices government or socialized medicine.

I hope you will understand my position and agree with me that my non-participation in government medicine is the only ethical and moral course I can honorably follow to safeguard your access to the best medical care of which I am capable of giving.

Under the free enterprise system greater advances had been made in medicine in this country than in any other country in the world since the time of recorded history — all in the short span of less than two hundred years.

Under the pressure of the patient gradualism of the socialistic communistic conspiracy our country has accepted the Marxist philosophy "from each according to ability and to each according to need" in the field of medicine. At long last the bureaucratic socialists have the power of life and death over a fairly large portion of American citizens — and these citizens are our neighbors, friends and even members of our own families.

You might ask who is responsible and the truth is each one of us who through his apathy, fear or greed (in his search for security) has allowed a small number of power hungry conspirators to control our lives with the fruits of our own labor.

If you value your life or the lives of your loved ones it's time you made an effort to root out this evil that now envelops us for the beasts in control of the socialistic communistic conspiracy in this country can only go in one direction — towards ever more and more control over increasing parts of our lives in their insatiable demand for ever more power.

I realize that my stand will not be popular among my friends or among the socialists for this subject of medicare has now become "controversial" as every issue does that stands for principal and honor as opposed to expediency and dishonor in this battle now drawn between collectivism and freedom.

Many people have criticized me for my efforts in staving off the onrush of socialism and have said I would be a good doctor if I would keep out of politics or anything controversial. To these critics I have this to say: I am first of all a free individual and can only honorably follow my profession by remaining free as is my God-given right. No man, no matter what his title or position, has the right to take from me that given by the Supreme Being. It is not only my right but my duty to remain free.

To those of you under a double obligation and to those of you who say, "The triumph of evil rests upon good men doing nothing" and then do nothing but criticize those of us who are trying, I say you may never be called to task in this world but your chances of escaping the evil now upon us are just about as poor as mine.

I did not choose to enter this battle but as God is my judge I will not shirk my duty as a citizen and as a physician in fighting the disease

of communism which has now made all other diseases secondary. To try and relieve suffering and to have my efforts thwarted by one or many of the faceless, nameless, parasitic bureaucrats hiding behind their collective regulations is something which I will not tolerate.

I have here stated my avowed purpose and direction in which I shall go and with the help of the Great Architect of the Universe the time will come when the collectivists have again crawled back from whence they came.

William E. Gorder, M.D.
Bagdad, Arizona
THE ARIZONA REPUBLIC
November 30, 1965

December 1, 1965

Dr. Wm. E. Gorder

Bagdad, Arizona

My dear Doctor:

Bravo, it is encouraging and rare indeed to see one Doctor in Arizona with enough guts to defy this Socialistic Cabal in Washington who would transform us Senior Citizens into a group of Zombies.

Phooey on the cringing, fawning M.D.'s who would sell their professional dignity for a mess of pottage and who would rather switch than fight.

I am a senior citizen 71 years old. I have not applied for Medicare and I have no intention to. As far as I am concerned, and a lot of other senior citizens I have talked to, they can take Medicare and blow it out through the holes in their head. We want no part of this Socialistic monstrosity fostered upon us by the sanctimonious, Socialistic zealots in Washington who seek to control our lives from the cradle to the grave.

If I ever get sick I do not choose to stand for hours in a line of hypochondriacs waiting for a box of sugar pills or a bottle of aspirin under a fancy name.

Doctor, please allow me to congratulate you on your distinctive individualism.

Most sincerely yours,
(signed) Frank Harris
Bard, California

"IS THIS WHERE WE ARE HEADED?"

This Isn't Poverty

Someday someone will write a book entitled "The Poverty War and How It Grew." Voted by Congress as a means of breaking the poverty cycle, of getting the nation's lowest income class to help itself, the war on poverty already has become a means of reducing self-help and extending the boundaries of welfare.

From Denver, for instance, our regional editor, Robert W. Glasgow, reports that a Neighborhood Health Center will be started as an anti-poverty project in mid-December. Using federal funds, it will provide the people of East Denver (at least some of the 40,000 in that area) with general dental and medical services. Families with incomes of up to $5,000 annually will be eligible, and of course the services and medicines will be free.

Just how a family with an income of $5,000 gets into the poverty class escapes us. Until now, the usual yardstick has been an income of $3,000. But there is nothing quite equal to a bureaucrat with a gleam in his eye and an appropriation in his hand, so we suppose that almost inevitably the poverty warriors will be looking for new worlds to conquer. While the agency is supposed to use discretion in admitting those in the $5,000 category, we don't see how it can practice discrimination.

Actually, the average weekly income of employed persons in Colorado is $112.34. If there is one bread-winner in a family, the average family income would work out to $5,841.68 a year. But if a family gets a meager $841.68 less than the average, it will qualify for free medical and dental treatment under the Denver Health Center plan.

A family with an annual income of $5,000 a year is not in poverty, and everyone knows it. The majority of workers who earn $5,000 a year in the United States are covered by medical insurance, usually paid for by employers. To give families in this bracket free medical care is to use poverty war funds to push the nation into socialized medicine. It will subvert the real aim of the poverty war program, which is to help those at the bottom of the economic scale.

THE ARIZONA REPUBLIC
December 1, 1965

MEDICARE AND LABOR

Unions Begin Pressing Firms to Supplement Federal Plan for Aged

Having finally got through Congress, medicare is now landing on the labor-management bargaining table.

Unions that lobbied long and hard for the Federal law providing hospital and medical benefits for those aged 65 or over under Social Security now are pressing employers to supplement this coverage with company-paid benefits. Some sample demands: That companies pick up the $3 monthly premium that aged workers, the retired and their wives must pay to come under medicare's "Plan B," which covers doctor bills and outpatient services; and that companies permitting workers to retire on pension before 65 pay for medicare type benefits until the worker turns 65 and comes under the Federal program.

Negotiations on such demands already have started, or soon will, in the auto, farm tool, aluminum, can, communications and glass container industries, to name a few. The list surely will broaden, too. Unions argue that Federal medicare, which goes into effect next July, will relieve companies of many medical expenses they now pay for aged workers and the retired, so that the money can be used to provide additional benefits. At least some companies tend to agree.

"A Minimum Bill"

"We see medicare, like the original Social Security Act, as a "minimum bill," says Ralph L. Helstein, president of the 140,000-member United Packinghouse Workers. "We intend to try to extend it."

Talks with economists, company labor relations men, welfare experts and leaders of more than a dozen major unions indicate medicare eventually will affect labor-management relations in several other ways, too. Beginning next year, it could encourage retirement of many of the 1.5 million persons aged 65 or more who still work full time. Many have stayed on the job almost solely because they fear their savings and prospective Social Security and company pension benefits won't cover medical bills they might incur in retirement.

These elderly workers constitute about 2% of the U.S. labor force. If many retire, more jobs and promotion opportunities would open for younger workers — perhaps relieving the pressure on unions to create such opportunities by winning new contract provisions from employers.

The advent of medicare also is reviving some unions' interest in the idea of building union-run hospitals with the money employers pay into union welfare funds. Federal payment of the hospital expenses of patients aged 65 and over would go a long way toward putting union-run hospitals on a sounder financial footing than some of the few already constructed have been, some labor officials figure.

More for the Young?

Most important, perhaps, many company and union men believe medicare eventually will prompt union negotiators to shift some emphasis away from winning fringe benefits, which typically are desired most by older workers, to winning wage pay gains, which typically interest younger men most. Medicare, in this view, will provide aging works with so much of the security they yearn for that union bargainers can devote more energy to satisfying the desires of their younger members.

That would be quite a switch. From 1959 to early 1965 fringe benefits have been rising about 6% annually, nearly twice the 3.2% average annual union negotiated gain in paychecks, according to Labor Department economists.

"Medicare should take the pressure off unions to keep pressing for more for their older people," says William G. Caples, labor relations vice president of Inland Steel Co. An official of the union he negotiates with, the United Steelworkers of America, agrees. The USW up to this year went four years without a negotiated pay raise, while concentrating on fringe benefits. But Medicare "will make it easier for us to concentrate more on pay next time," which will be 1968, a union man says.

Beyond the Federal Plan

Right now, however, many a union's emphasis is strongly "pressing for more for the older people" by meshing company plans with medicare. At firms that now provide benefits, similar to medicare, unions are seeking to cut out duplications, to free money for company benefits going beyond the Federal programs. At companies without such plans, the unions are seeking

new gains.

Currently, the 1.1 million member United Auto Workers is asking auto and farm machinery producers not only to pick up the $3 monthly premium that the aged will have to pay for coverage under medicare's Plan B, but also to pay many other expenses for active and retired workers over 65, and their wives, that won't be covered by medicare. These include a $40 deductible expense for the first 60 days of hospitalization; a $10-a-day charge for hospital stays between 61 and 90 days, and a $5-a-day charge for nursing home stays between 21 and 100 days.

The UAW and the auto companies are discussing these demands without formal re-opening of the three-year contracts signed in 1964. It also is talking already of further demands to be made in 1967's full-contract negotiations. These may include company payments for eyeglasses, dental care and out-of-hospital drug prescriptions.

Some unions already have won major company-paid supplements to medicare. In a contract signed in September with the International Union of Electrical Workers, one unit of Litton Industries, Inc., agreed to pay the $3 monthly medicare Plan B premium, and the initial $40 hospitalization deductible, for retirees and their wives.

Douglas Aircraft Corp. agreed to the same provisions in recent contracts with the UAW and the International Association of Machinists covering 35,000 workers. Douglas also agreed to provide company-paid benefits similar to medicare for retirees and their wives until July 1, when the Federal program begins, for a single $50 deductible payment.

The IAM won an even bigger concession recently from Lockheed Aircraft Corp. Lockheed agree to pay 80% of the medical expenses of workers who retire before 65, and their wives, up to $10,000, subject to an annual deductible of $50 a person. A Lockheed employe who retires at 55, which is permitted, can in effect, get medicare coverage at the company's expense for 10 years, until he comes under the Federal program.

"The Lockheed plan makes early retirement easier and more meaningful," says Albert S. Epstein, IAM associate research director. "It's something we'd like to extend to more contracts."

Company reactions to such demands vary. Douglas Aircraft until this year resisted union demands for broad new medical plans for the retired. But it agreed to supplement Federal medicare benefits because the Federal plan will "at least remove the administrative burden on us, making the new benefits somewhat more palatable," says John J. Franke, Douglas administrator of group benefits.

Big Tax Boost

One auto company, however, says union claims that medicare will save money for employes are "debatable." And other companies figure medicare in one way will raise their payroll costs. To finance the program, and a boost in Social Security pensions, Congress has enacted the biggest tax increases in Social Security history.

At present, worker and employer each pay a tax of 3.625% on the worker's first $4,800 of annual wages. Next year that will go up to 4.2% of the first $6,600 of wages; by 1969 the tax rate will go up to 4.9%. Thus the maximum tax that companies pay for each worker on their payrolls will rise from $174 this year to $277.20 next year, and to $323.40 by 1969. Companies count this as a direct increase in labor costs, even though the extra payments will be made to the U.S. Treasury, rather than to their workers.

"Anything that influences labor costs has to be taken into account in any future planning on the whole questio nto employe pay and benefits," says General Electric Co., which will bargain with several unions next year. GE figures the Social Security tax increases will raise its labor costs by $165 million over the next 10 years, based on current pay and employment levels. The steel industry figures the tax boost will add six cents an hour to the package it has just negotiated with the USW, which has been valued at 47 to 52 cents an hour.

New Look at Hospitals

However they make out in bargaining to supplement medicare with company benefits, some unions plan to take another look at expanding their own medical services to members by setting up union-run hospitals. The AFL-CIO to date has discouraged such moves, contending that hospital administration is a difficult task even for professionals, let alone unionists, and the most ambitious union venture in this field so far has been a flop. The United Mine Workers Welfare and Retirement Fund, which is financed by royalty payments from coal operators, opened

10 hospitals in the Appalachian coal fields in 1956 and 1957, but sold them all to a church group in 1963.

Now that Federal medicare payments promise to bolster hospital finances, however, some unions are showing a new interest. The 450,000-member International Ladies Garment Workers Union is considering setting up a nursing home in the New York area, by the time medicare's nursing-home benefits begin on Jan. 1, 1967.

"Nursing homes are in short supply; we feel we could make a contribution there," says Louis Rolnick, ILGWU health and welfare director. The ILGWU already runs 13 clinics around the country. Each can accommodate 975 patients.
California Plans

A potentially far larger program is brewing in California. There, representatives of a half-dozen major unions have been meeting for several months to explore ways of coping with rising medical costs. Proposals so far include building union-operated hospitals, sponsoring group practice clinics and setting up a medical insurance company to compete with existing companies.

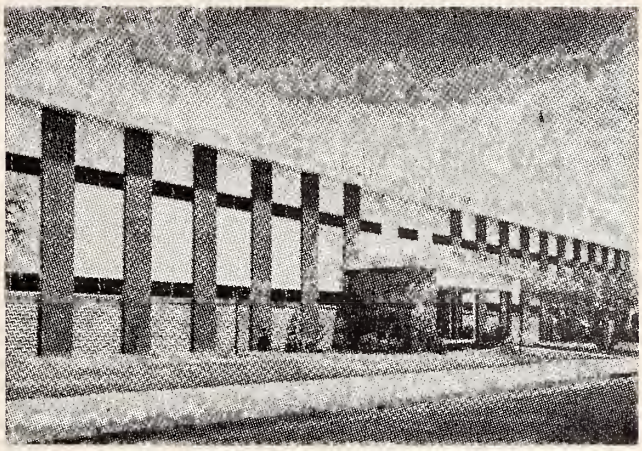
"Medicare not only will pay a lot of the bills, but it should help create a more favorable climate to such departures," says an official of the Western Conference of Teamsters. "Without it we'd never consider getting into anything like it."

The UMW Welfare Fund is understood to be out of the hospital business for good, but miners still stand to get substantial indirect benefits from medicare. Starting next July the fund will be relieved of most of its estimated $10 million annual payout for medical care for retired UMW members and their dependents. Some UMW officials have suggested publicly that the savings go into boosting pensions to as much as $150 a month per worker from the present $100.

Frederick C. Klein
Staff Reporter of The Wall Street Journal
November 18, 1965

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Jack O. McFarland, M.D.
GENERAL SURGERY — CANCER
Herbert N. Munhall, M.D.
INTERNAL MEDICINE & CARDIOLOGY
John F. Currin, M.D.
OBSTETRICS & GYNECOLOGY
Roy O. Young, M.D.
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Who are these "candidates for Candida?"

1. diabetic patients
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3. elderly or debilitated patients
4. patients with a past history of moniliasis
5. patients on long-term tetracycline or corticosteroid therapy.

For these patients, Tetrex-F provides efficient tetracycline therapy against a broad range of infections *plus* protection against superinfection associated with the overgrowth of *C. albicans* in the G.I. tract.

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For complete information, consult Official Package Circular.

Indications: Infections of respiratory, gastrointestinal, and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms.*

Contraindications: The drug is contraindicated in patients hypersensitive to its components.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.

Usual Adult Dose: 250 mg. *q.i.d.* Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals.

Available: Capsules, tetracycline phosphate complex, 250 mg., and nystatin, 250,000 units.

*In patients with increased susceptibility to monilial infections.

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Contraindications: Tuberculous, fungal, and most viral lesions of the skin (including herpes simplex, vaccinia, and varicella). Not for ophthalmic use.

Precautions: In some patients with dry lesions, the solution may increase dryness, scaling, or itching. Application to denuded or fissured areas may produce burning or stinging. Although propylene glycol has some antiseptic activity, infected lesions require appropriate evaluation and therapy. As with all drugs, use with caution in pregnant patients. **Side Effects:** Side effects are not encountered ordinarily with topically applied corticosteroids. As with all drugs, however, a few patients may react unfavorably to Synalar under certain conditions. **Availability:** Synalar (fluocinolone acetonide) Solution 0.01% in a vehicle of propylene glycol with citric acid as preservative—20 cc. and 60 cc. plastic squeeze bottles.

*Lubowe, I. I.: Scalp dermatoses: Treatment with fluocinolone acetonide in propylene glycol. Skin 3:267 (Sept.) 1964.

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ROBERT L. REID, M.D., AWARD RECIPIENT

The Crippled Children's Hospital Medical Staff is extremely proud to announce that one of its Orthopedic Residents, Robert L. Reid, M.D., was the recent recipient of the Second Annual presentation of the Colonel Robert Skelton award. This award is given annually to the individual selected as representing the outstanding Medical Corps resident at Letterman General Hospital for the training year involved. The initial award was given to a resident in internal medicine.

The award was established by Mrs. Grace Skelton of San Francisco, in memory of her late husband, Colonel Robert Skelton, U.S. Army Medical Corps. Dr. Reid was presented with an engraved certificate and a check for $600 by Brigadier General Charles H. Gingles, Letterman Hospital Commander. In making the award, Dr. Gingles noted that Dr. Reid's "diagnostic ability, technical surgical skills, pre-and post-operative patient management were outstanding qualities of his assignment application. His research work was an outstanding contribution to the knowledge of body tolerance and stress reaction of plastic resins. His organizational ability in the actual management and delivery of programs before military and civilian university groups were outstanding. In addition, he has been the author of four professional papers, during his period of training."

Dr. Reid, a Major in the United States Army Medical Corps, was assigned to the Crippled Children's Hospital to spend his final year of orthopedic residency, after completing his first three years at Letterman General Hospital in San Francisco, following a one-year residency in General Surgery at Ft. Belvoir, Virginia. He is one of three physicians from the U.S. Army Medical Corps now serving in the Orthopedic Surgical Residency Program at Crippled Children's Hospital. The program is under the direction of Warren A. Colton, Jr., M.D., who is also Chief of Orthopedic Services, as well as a member of the Executive and Medical Education Committees of the Crippled Children's Hospital Medical Staff.

Dr. Reid is a graduate of Murray State College, Murray, Kentucky, Class of 1952, and the University of Louisville Medical School, Class of 1956, where he tied for first place in the class standings. Thereafter, he interned at St. Joseph's Infirmary, Louisville, and was in private general practice in Frankfurt, Kentucky for a brief period before entering active army duty in January, 1958. Dr. Reid was sent to Germany, where he served a year as Battle Group Surgeon with the Third Infantry Division at Schweinfurt and was then reassigned to the Orthopedic Center, 98th General Hospital, Nebroucke for a year, and then to the 97th General Hospital's Orthopedic Center in Frankfurt, for his final year. While with the First Battle Group of the Third Infantry Division, Dr. Reid was awarded the Certificate of Achievement for his work on a plan for handling evacuations on the field. He is a member of the American Medical Association and the Society of Military Orthopedic Surgeons. He and his wife, Bettye Sue, are the parents of a son, Randy, ten, and a daughter, Robbye, eight. The family residence is 8036 East Earll Drive in Scottsdale.

ARIZONA CHAPTER WESTERN ORTHOPEDIC ASSOCIATION

The current officers of this association are as follows:

President — Ray Fife, M.D.
President-Elect — Stanley Tanz, M.D.
Secretary-Treasurer — T. H. Taber, Jr., M.D.

This is the state chapter of the parent organization — The Western Orthopedic Association — which is confined to approximately twelve of the westernmost states of the United States. A meeting is held once a year by the parent organization at a city in one state. The rotation occurs year by year. This is purely an orthopedic group.

The state chapter holds yearly meetings in conjunction with the State Medical Association in the spring of each year. Meetings are held on alternating years between Phoenix and Tucson at the Crippled Children's Centers where scientific programs are presented.

NEWS BRIEFS FROM BARROW NEUROLOGICAL INSTITUTE

Dr. John R. Green recently attended the Annual Meeting of the Western Neurological Society in Seattle, Washington. Dr. Green is now President of this Society.

Dr. David Daly was a guest speaker at the Southwestern Medical School in Dallas and the University of Rochester, New York. He also attended the Annual Meeting of the Neurological Sciences Research Training Committee in Bethesda, Maryland, as was elected Treasurer of the International League Against Epilepsy.

TUCSON NURSING HOME RECEIVES ACCREDITATION

The Santa Rosa Nursing Home of Tucson, Arizona has been accredited as an Intensive Nursing Care Facility by the National Counsel for the Accreditation of Nursing Homes, it was recently announced.

The National Council was established in April 1963 under the sponsorship of the American Medical Association and the American Nursing Home Association to promote standards of professional care of high quality in the operation of nursing homes throughout North America.

The Council's program is a voluntary one, surveys being made only on the request of the facility involved.

Following are those nursing homes in Arizona that have previously been accredited by the Council:

The Bells Lodge — Phoenix

Kivel Nursing Home — Phoenix

Sheltering Arms Nursing Home — Phoenix

Williams Convalescent Home — Phoenix

Casa Solana Nursing Home — Tucson

Devon Gables — Tucson

El Gran Sanitarium — Tucson

Forrester's Old Pueblo Casita — Tucson

House by the Side of the Road — Tucson

Lighthart's Desert Sanitarium — Tucson



NINTH ANNUAL CARDIAC SYMPOSIUM

under the auspices of the

Arizona Heart Association

January 28 and 29, 1966

Del Webb TowneHouse

Phoenix, Arizona

Some of the featured speakers and topics:

F. Mason Sones, M.D., Cleveland, Ohio — Case Selection and Evaluation for Prosthetic Valve Replacement.

Elliot Rapaport, M.D., San Francisco, Calif. — Present Criteria for Selection of Patients with Acquired Heart Disease for Surgery.

Leonard Linde, M.D., Los Angeles, Calif. — Office Management of the Patient with a Heart Murmer.

Donald B. Effler, M.D., Cleveland, Ohio — Surgical Treatment of Coronary Artery Disease.

Panel Discussions —

Special activities planned for family members and guests during the Symposium sessions.

REHABILITATION SYMPOSIUM ON STROKE AND OTHER LONG TERM ILLNESS—THE HOSPITAL TEAM APPROACH

Pioneer International Hotel
Tucson, Arizona

February 19 and 20, 1966

Guest Speakers: Carlos Vallbona, M.D., Professor of Physiology, Pediatrics, and Rehabilitation, Baylor Univ. College of Medicine, Houston, Texas.
Miss Miriam Partridge, R.P.T., Houston, Texas.
Miss Lucie C. M. Schultz, R.N., M.S.—Nursing, Asst. Professor, College of Nursing, Texas Woman's University, Houston, Texas.

Sponsored by: St. Mary's Hospital, Tucson. Symposium attendance is open to M.D.'s, Para medical, R.N.'s, L.P.N.'s and Health Agencies.

ARIZONA CHAPTER OF THE AMERICAN COLLEGE OF SURGEONS ANNUAL MEETING

January 21 and 22, 1966

Arizona Biltmore Hotel
Phoenix, Arizona

Guest Speakers: Paul Bucy, M.D.; George Shambaugh, M.D.; Ben Eiseman, M.D.; Lloyd Niehaus, M.D. and Bernice Sachs, M.D.

ARIZONA STATE SOCIETY OF RADIOLOGIC TECHNOLOGISTS WESTERN STATES SYMPOSIUM

February 12 and 13, 1966

Bali Hi Motor Hotel
Phoenix, Arizona

Participants will include Radiologists and Radiologic Technologists from Arizona, California, Colorado, Nevada, New Mexico and Utah.

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If you went to Goldwaters or Diamonds and ask them what their losses are, they would figure their total sales less their cash customers and base their annual loss on just the total of their credit accounts. This is just plain good business. Your losses should be calculated the ame way. Deduct from your total practice those accounts that are paid by insurance and industrial, your so-called "cash" customers and then compute your losses on the total of the accounts to which you have extended credit. This loss figure will vary from doctor to doctor since insurance will pay a bigger proportion of a surgeon's practice than an ellergist's or internal medicine specialist. Accounts you could refer to M & D for Budget Plan financing are those of unknown quality . . . the ones you know won't be "cash" or paid by insurance or industrial. Make it known to your patients that you offer a Budget Plan for Health by displaying your Membership Plaque and refer them to us with an Introduction Card. You will realize immediately the full amount of the bill less the small 10% service fee and without recourse.

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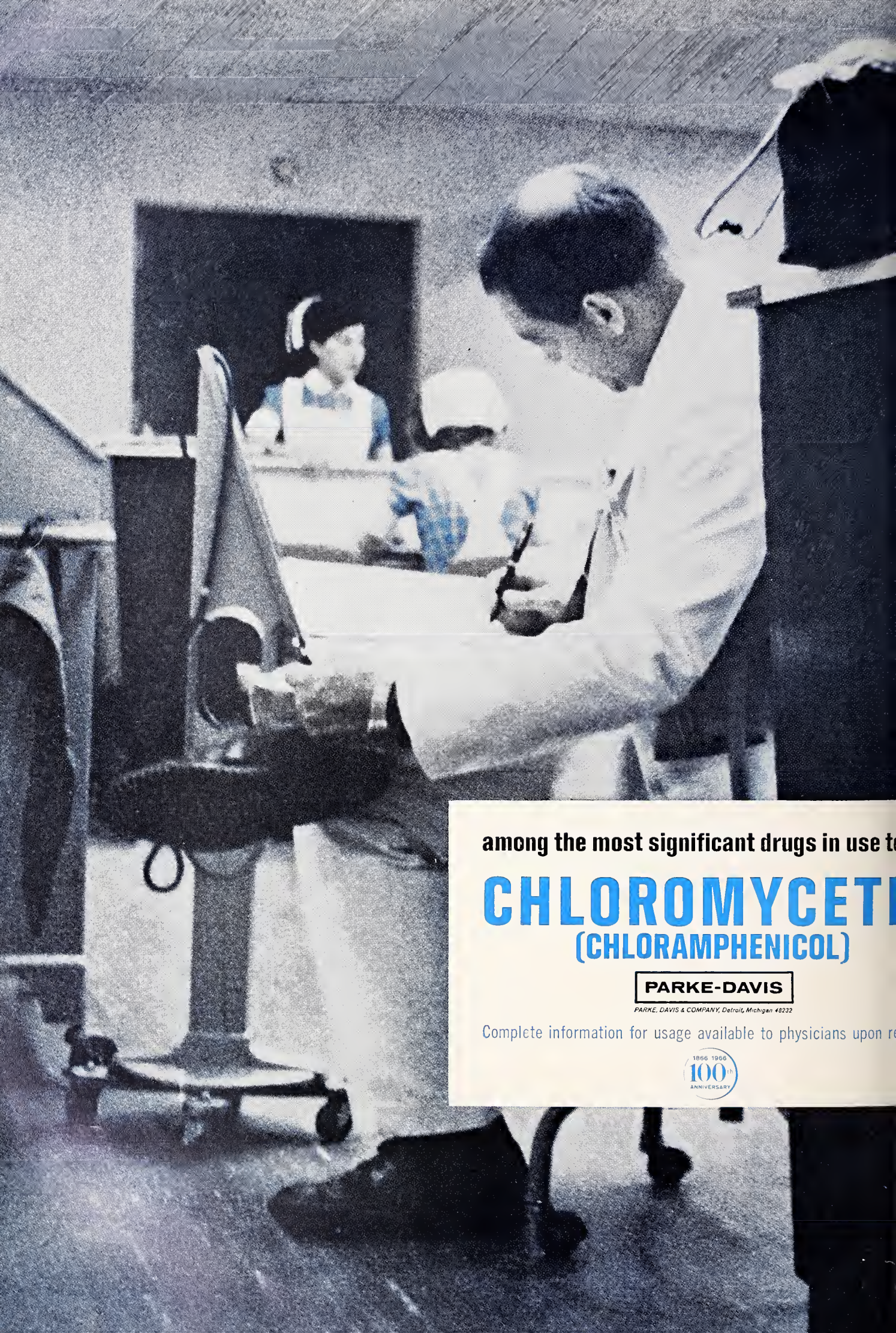
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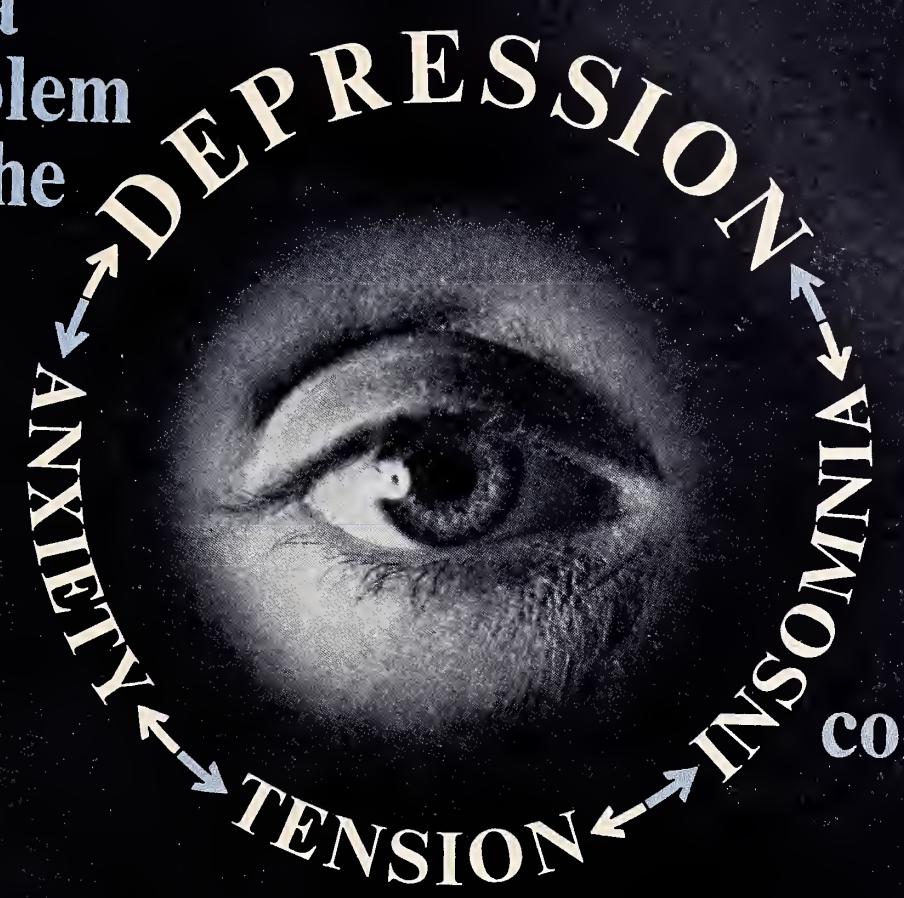
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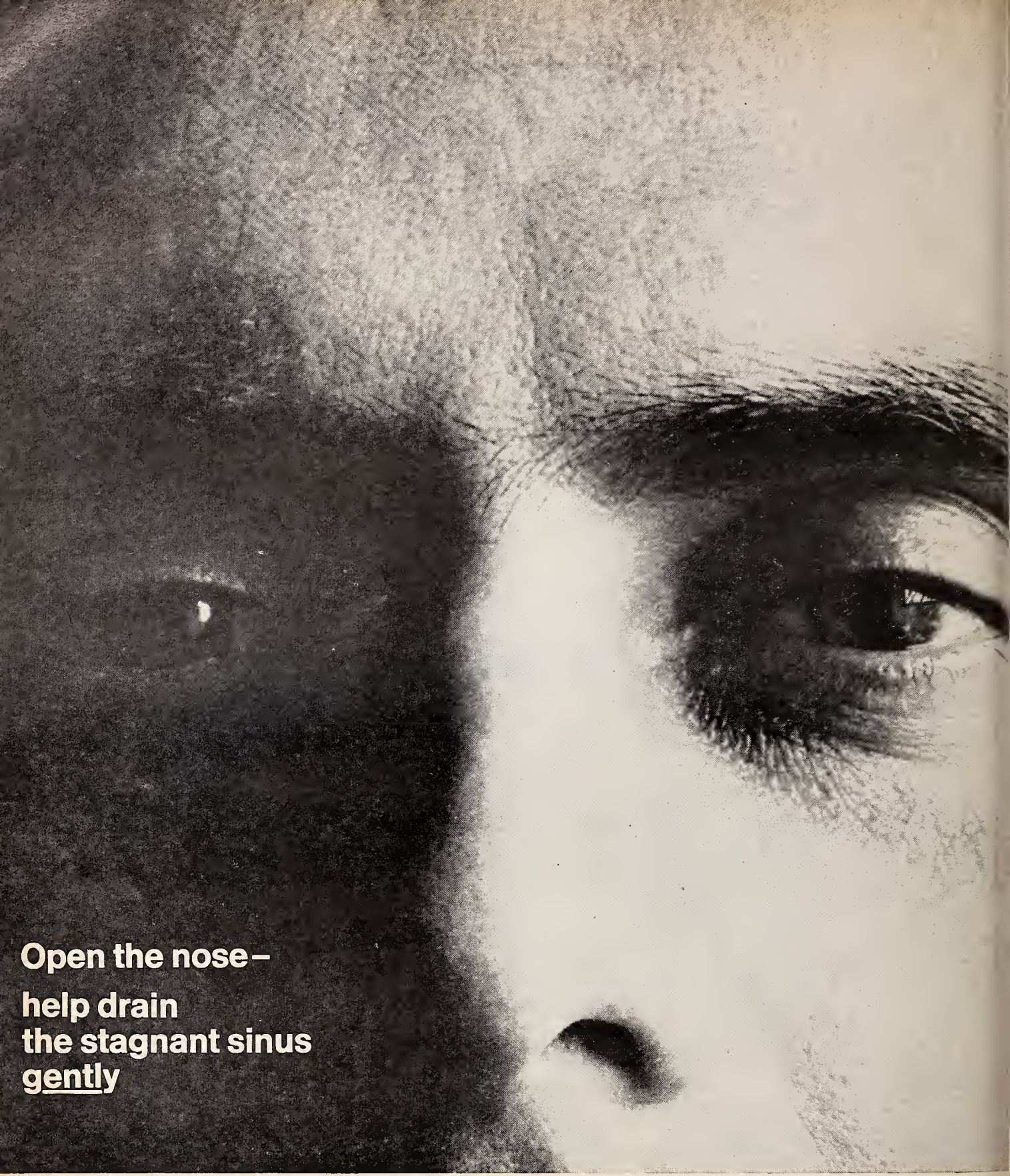
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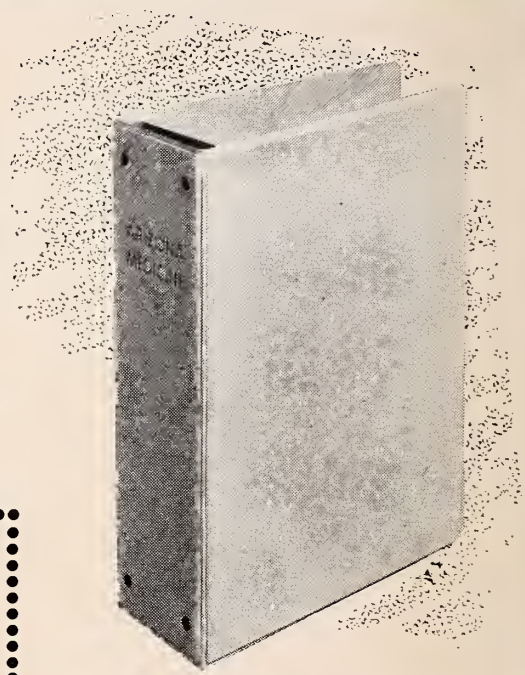
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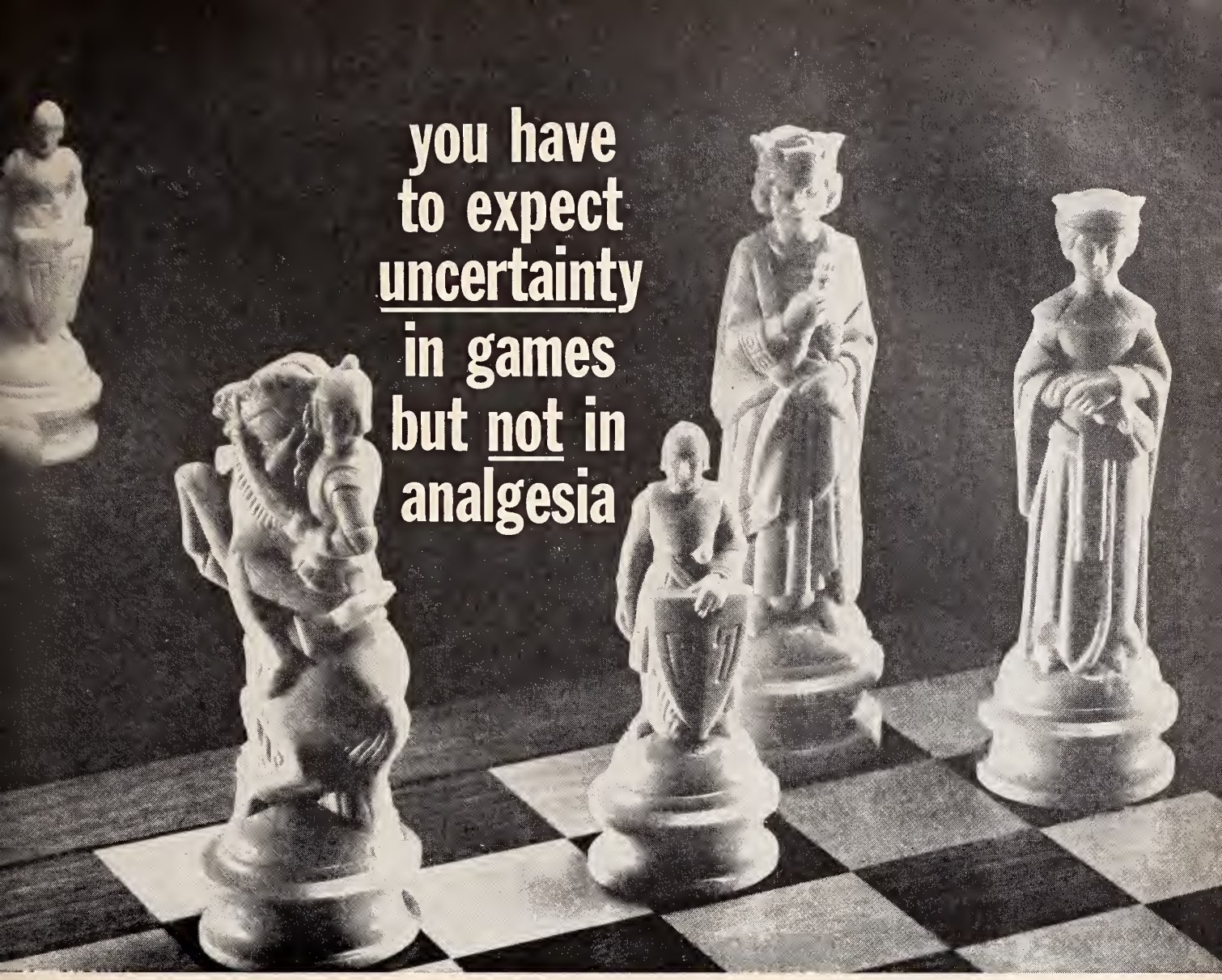
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Hermann S. Rhu, Jr., M.D. Southern District
5th St. & Alvernon Way, Tucson, Arizona
Howard W. Finke, M.D. Southwestern District
Magma Hospital, Superior, Arizona

COMMITTEES — 1965-66

NOTE: The President, President-elect and Secretary are ex-officio members of all Committees unless otherwise specified.

ARTICLES OF INCORPORATION & BY-LAWS COMMITTEE: Walter Brazie, M.D., Chairman (Kingman)

BENEVOLENT & LOAN FUND COMMITTEE: Daniel T. Cloud, Jr., M.D., Chairman (Phoenix)

CENTRAL OFFICE ADVISORY COMMITTEE: Arthur V. Dudley, Jr., M.D., Chairman (Phoenix)

EXECUTIVE COMMITTEE: James E. O'Hare, M.D., Chairman (Tucson)

GRIEVANCE COMMITTEE: W. Albert Brewer, M.D., Chairman (Phoenix)

HISTORY & OBITUARIES COMMITTEE: Robert S. Flinn, M.D., Chairman (Phoenix)

INDUSTRIAL RELATIONS COMMITTEE: Christopher A. Guarino, M.D., Chairman (Tucson)

LEGISLATIVE COMMITTEE: Jess D. Hamer, M.D., Chairman (Phoenix)

MEDICAL ECONOMICS COMMITTEE: Ian M. Chesser, M.D., Chairman (Tucson)

PROCUREMENT & ASSIGNMENT COMMITTEE: Joseph M. Greer, M.D., Chairman (Phoenix)

PROFESSIONAL COMMITTEE: Jack E. Brooks, M.D., Chairman (Phoenix)

PUBLIC RELATIONS COMMITTEE: Arnold H. Dysterheft, M.D., Chairman (McNary)

PUBLISHING COMMITTEE: Robert F. Lorenzen, M.D., Chairman (Phoenix)

SCIENTIFIC ASSEMBLY COMMITTEE: John S. Carlson, M.D., Chairman (Phoenix)

COUNTY MEDICAL SOCIETY OFFICERS FOR 1965

APACHE: W. Duncan Spining, M.D., President, Sage Memorial Hospital, Ganado; Ellis W. List, Jr., M.D., Secretary, McNary Hospital, McNary.

COCHISE: Raymond Grossman, M.D., President, Drawer 1059, Douglas 85607; Jorge Gaytan, M.D., Secretary, Drawer S. Douglas.

COCONINO: Hugh E. Dierker, M.D., President, 505 N. Beaver, Street, Flagstaff; R. T. McDonald, M.D., Secretary, 713 N. Beaver Street, Flagstaff.

GILA: David B. Gilbert, M.D., President, Physicians & Surgeons Clinic, Payson; Alford D. Musgrave, Jr., M.D., Secretary, 703 Ash Street, Globe.

GRAHAM: John H. Walker, M.D., President, 702 8th Avenue, Safford; Donald E. Nelson, M.D., Secretary, 503 5th Avenue, Safford.

GREENLEE: Stanton C. Lovre, M.D., President, Box 1687 Clifton; Gerhard L. Ihm, M.D., Secretary, Phelps Dodge Hospital, Morenci.

MARICOPA: Ray Fife, M.D., President, 2620 N. 3rd Street, Phoenix; Charles H. Finney, M.D., Secretary, 555 W. Catalina Dr., Phoenix.
(Society Office — 2025 North Central Avenue, Phoenix)

MOHAVE: John G. Lingenfelter, M.D., President, 412 E. Oak Street, Kingman; John J. Standifer, M.D., Secretary, 412 E. Oak Street, Kingman.

NAVAJO: Claude H. Peterson, M.D., President, 1500 Williamson Ave., Winslow; Leo L. Lewis, M.D., Secretary, Santa Fe Medical Offices, P. O. Box 673, Winslow.

PIMA: Juan E. Fonseca, M.D., President, 601 N. Wilmont Rd., Tucson; Elliott E. Stearns, Jr., M.D., Secretary, 2442 E. Elm St., Tucson.
(Society Office — 2555 East Adams Street, Tucson)

PINAL: Chalmers D. Johnson, M.D., President, 1195 N. Arizona Blvd., Coolidge; Richard F. Adamson, M.D., Secretary, Florence Medical Center, Florence.

SANTA CRUZ: Henri S. Denninger, M.D., President, P. O. Box 37, Tumacacori; Charles S. Smith, M.D., Secretary, Gebler Building, Nogales.

YAVAPAI: W. David Rummel, Jr., M.D., President, 114 North Montezuma, Prescott; William R. Shepard, M.D., 1003 Division St., Prescott.

YUMA: James Volpe, Jr., M.D., President, P. O. Box 1151, Harold N. Gordon, M.D., Secretary, 1832 8th Avenue, Yuma.
(Society Address — P. O. Box 4370, Kofa Substation, Yuma)

WOMAN'S AUXILIARY TO THE ARIZONA MEDICAL ASSOCIATION — 1965 - 1966

President Mrs. Hubert Estes (Mickie)
Route 2, Box 741-B, Tucson, Arizona
President-Elect Mrs. Robert G. Delph (Grace)
2019 North Crescent Drive, Flagstaff, Arizona
1st Vice President Mrs. Elvie B. Jolley (Mila)
Box 919, Bisbee, Arizona
2nd Vice President Mrs. Richard Dexter (Bobbe)
6842 East Tawa, Tucson, Arizona
Treasurer Mrs. Seymour Shapiro (Arline)
5433 East 8th Street, Tucson, Arizona
Recording Secretary Mrs. Charles Matheus (Marilyn)
2148 East 25th Street, Yuma, Arizona
Corresponding Secretary Mrs. Keith Treptow (Pat)
6940 E. Acoma Place, Tucson, Arizona
Director Mrs. Richard B. Johns (Ruth)
508 West Rose Lane, Phoenix, Arizona
Director Mrs. Juan Fonseca (Virginia)
Route 2, Box 741, Tucson, Arizona

SOCIEDAD MEDICA DE ESTADOS UNIDOS DE NORTE AMERICA Y MEXICO
MEDICAL SOCIETY OF THE UNITED STATES & MEXICO

President Dr. L. Maxwell Lockie
130 Morris Avenue, Buffalo I4, New York
President-Elect Dr. Alfonso Topete Duran
Edificio Professional, Juarez y Pavo, Guadalajara, Jalisco, Mexico
Vice President Dr. James Nauman
1603 North Tucson Boulevard, Tucson, Arizona
Secretary for the United States Dr. Earl J. Baker
550 West Thomas Road, Phoenix, Arizona
Secretary for Mexico Dr. Felix Michel
Pavo 112, Guadalajara, Jalisco, Mexico
Treasurer for the United States Dr. Lucy A. Vernetti
333 West Thomas Road, Suite 207, Phoenix, Arizona
Treasurer for Mexico Dr. Eduardo Gonzalez Murguia
Juarez 673, Guadalajara, Jalisco, Mexico
Executive Secretary for Mexico Mr. Alfredo E. Patron
Mazatlan, Sinaloa, Mexico

BOARD OF DIRECTORS

Meeting of the Board of Directors of The Arizona Medical Association, Inc., held Sunday, December 12, 1965, in the Convention Center of the Safari Hotel, Scottsdale, Arizona, convened at 10:10 a.m., Arnold H. Dysterheft, M.D., Vice President and Chairman, presiding.

ROLL CALL

PRESENT:

Drs. Brazie, Walter; Brewer, W. Albert; Cloud, Jr., Daniel T.; Derickson, Philip G.; Dexter, Richard L.; Dierker, Hugh E.; Dudley, Jr., Arthur V., Treasurer; Dysterheft, Arnold H., Vice President and Chairman; Finke, Howard W.; Flynn, Richard O..

Drs. Henderson, Charles E., Secretary; Jarrett, Paul B., President-Elect; McDaniel, W. Shaw; Melick, Dermont W.; Moody, Deward G.; O'Hare, James E., President; Price, Robert A.; Rhu, Jr., Hermann S.; Smith, Noel G.; Steen, William B.; Taylor, Ashton B.

COUNSEL:

Mr. Jacobson, Edward.

STAFF:

Messrs. Carpenter, Robert, Executive Secretary — ArMA; Robinson, Bruce E., Assistant Executive Secretary — ArMA; Boykin, Paul R., Executive Secretary — BOMEX.

GUESTS:

Dr. Blasingame, F. J. L., Executive Vice President — AMA; Mr. Whaley, Dallas F., Field Service Representative — AMA.

EXCUSED:

Drs. Beaton, Lindsay E.; Haley, III, Robert J.; Lorenzen, Robert F.

MINUTES

Approved minutes of meeting of Board of Directors held September 19, 1965.

AMA HOUSE OF DELEGATES

Authorized preparation and distribution of copies of the Report on Actions of the House of Delegates of the American Medical Association, 19th Clinical Convention, November 28 through December 1, 1965, Philadelphia, Pennsylvania, received from the Executive Vice President of the American Medical Association, to all members of the Board of Directors of this Association.

AMERICAN MEDICAL ASSOCIATION

F. J. L. Blasingame, M.D., Executive Vice President of the American Medical Association on invitation was present and presented in detail the activities of the AMA and administration thereof under his responsibility and direction. The morning session was devoted entirely to this presentation followed by numerous questions asked by the members and answered by Dr. Blasingame. The morning session was concluded with an expression of grateful appreciation of and a rising vote of thanks to Dr. Blasingame for his attendance and presentation.

MEETING ADJOURNEY FOR LUNCHEON AT 12:15 P.M.

MEETING RECONVENED AT 1:35 P.M., ALL MEMBERS PRESENT DURING THE MORNING SESSION RESPONDED "AYE" TO THE ROLL CALL, THE CHAIRMAN, ARNOLD H. DYSTERHEFT, M.D., PRESIDING.

P. L. 89-97 — MEDICARE

The Executive Committee of this Board of Directors in meeting held Saturday, December 11, 1965, gave consideration to and recommended, associate with that portion of Part B, Title 18, Public Law 89-97, relating to CARRIER, that this Association respectfully request of the Secretary of Health, Education and Welfare, The Honorable John W. Gardner, M.D., that he favorably consider and designate Arizona Blue Shield Medical Service as the "carrier" for the State of Arizona. It was pointed out that Mr. John C. Foster, Executive Director of the Arizona Blue Shield Medical Service, stated that in the final analysis, the decision as to negotiation relating to "usual and customary" vs. "prevailing" vs. any other fee concept must be and will be on the basis of decision of the Arizona Medical Association and the Corporate Body of Arizona Blue Shield, if, as and when such decision is made, he (Mr. Foster) acting only as fiscal administrator. APPROVED.

It was regularly moved and unanimously carried that the Board of Directors (of the Arizona Medical Association) recommend to the Board of Trustees of Blue Shield, at its next annual meeting, that we have separate administrators for Blue Cross and Blue Shield.

PRIVILEGED COMMUNICATION — PHYSICIAN-PATIENT

Determined to refer to Counsel for preliminary study in cooperation with the Arizona Bar Association possible statutory changes regarding "privileged communication" involving doctors of medicine, attendant medical personnel (laboratory technicians, etc.), including those doctors of medicine engaged in the specialty field of psychiatry.

ArMA HOUSE OF DELEGATES

Referring to House Resolution 13, "Joint Husband-Wife Membership," adopted May 1, 1965, Pima County Medical Society, through its Board of Directors in meeting held September 28, 1965, voted unanimously not to endorse the plan for joint husband-wife membership. RECEIVED.

Cochise County Medical Society "decided to have the membership of the entire County Medical Society as joint memberships with their wives, and the dues have been raised five dollars to cover the dues thereof." RECEIVED.

BOARD OF DIRECTORS

ArMPAC Board of Directors

William B. Steen, M.D., Chairman of the ArMPAC Board of Directors, reported in detail the financial status associate with the operation of the ArMPAC program, including the current membership.

On motion regularly made and unanimously carried a sum of $1,000.00 was appropriated to ArMPAC for "educational purposes."

Appointed Richard O .Flynn, M.D. (Tempe); Sherman W. Thorpe, M.D. (Mesa); and Mrs. Clarc W. (Mary Anne) Johnson (Phoenix) members of the ArMPAC Board of Directors for a term 1965-66.

The Board (of the Arizona Medical Association) reaffirmed its confidence in the Chairman (of the ArMPAC Board of Directors), William B. Steen, M.D., as regards his activities in the organization of ArMPAC.

AMPAC Meeting — Chicago — November 5, 1965

Counsel reviewed his impression of a meeting recently attended by him and the Executive Secretary called by AMPAC in Chicago, Illinois, November 5, 1965. It was concluded that the sessions were informative pointing up the importance of AMPAC in cooperation with the local PAC movements, illustrating the techniques politically and legally.

Standing Committee Appointments

The following members have accepted appointment to the standing committees indicated for the respective terms indicated:

HISTORY & OBITUARIES — Robert S. Flinn, M.D. (1965-68), designated Chairman (1965-66).

LEGISLATIVE — Claude H. Peterson, M.D. (1965-67).

MEDICAL ECONOMICS — John H. Ricker, M.D. (1965-68).

PROFESSIONAL — William B. Steen, M.D. (1965-68).

PUBLIC RELATIONS — John S. Carlson, M.D. (1965-68); and William J. Clemans, III, M.D. (1965-68).

SCIENTIFIC ASSEMBLY — Warren A. Bennett, M.D. (1965-67).

Board of Medical Examiners — State of Arizona

Governor Samuel Goddard acknowledges receipt of certification of an additional nominee, Herman S. Rhu, Jr., M.D. (Tucson), as a member of the Board of Medical Examiners of the State of Arizona to fill a vacancy occurring July 1, 1965. Philip G. Derickson, M.D. (Tucson), was previously nominated, thus satisfying the statutory requirement of two nominees. The Governor stated thate he expects to make a decision shortly, expressing appreciation for the cooperation of this Board in this regard.

BENEVOLENT AND LOAN FUND COMMITTEE

Medical Student Loans

The Phoenix Clinical Club, in memory of the late Louis G. Jekel, M.D., who was Secretary-Treasurer of the Club for many years, presented a check in the sum of $500.00 to be deposited in the medical student loan fund of this Association and used accordingly. This contribution is quite substantial in that, under the existing VNB Trust, on the basis of 12.5 dollars for each dollar on deposit, it will provide funds for loans totalling $6,250.00.

It wa sregularly moved and unanimously carried that this Association acknowledge receipt of this contribution and express to the Phoenix Clinical Club its very grateful appreciation therefor in the furtherance of the objective to provide opportunity for qualified medical students in need to pursue a course of training in the field of medicine.

The Board was impressed by this generous contribution, expressing the view that "memorials" of this sort should be encouraged to expand the opportunity of students in financial need seeking a medical education to further the objective. It was suggested that public notice be made of the generosity of the Phoenix Clinical Club.

Medical Student Scholarships

Louis F. Brichta (Tucson), Maria Diaz Herrera (Gilbert), and Daniel R. Miller (Tucson), each recipients of a $500.00 scholarship award by this Association through its Benevolent and Loan Fund Committee, by letters, expressed their individual grateful appreciation for this consideration. RECEIVED.

CENTRAL OFFICE ADVISORY COMMITTEE

Membership Classification

PIMA:

Clarence E. Bensema, M.D. (Tucson) — Active, granted Associate — dues exempt, A/C retirement, effective January 1, 1966.

Marguerite S. Williams, M.D. (Tucson) — Active, granted Associate — dues exempt, A/C retirement (ill health), effective January 1, 1966.

William G. Schultz, M.D. (Tucson) — Active, granted Active, dues exempt — A/C 70 years, effective January 1, 1966.

Ellis L. Pollock, M.D. (Tucson) — Granted Service — one-half dues, A/C University of Arizona Student Health Service, effective 1965.

John S. Mikell, M.D. (Tucson) — Active, granted Associate — dues exempt, A/C retirement, effective January 1, 1966.

MARICOPA:

Samuel Morton Herman, M.D. (Phoenix) — Active, granted Associate — dues exempt, A/C illness, effective January 1, 1966.

MEDICAL ECONOMICS COMMITTEE

ODMC Contract Extension

Ratified execution of supplemental agreement extending the existing ODMC (Military Dependents' Medical Care) contract for the period beginning September 1, 1964, and ending February 28, 1966.

COMMUNICATIONS

AAGP — Pledge of Non-Discrimination

The Arizona Academy of General Practice in annual meeting October 8, 1965, unanimously adopted a resolution, referable to action of HEW requiring physicians treating patients under federally-assisted programs to sign pledges of non-discrimination, (1) informing all physicians that the refusal to sign such an oath does not flaunt the law, and (2) directing its Board and Officers to oppose actively and forcefully this and any future attempts by HEW or any other Federal agency to impose conditions and pledges upon the medical profession. Since the adoption of this resolution, HEW has retracted. RECEIVED.

AAGP — Social Security Health Care Plan

The American Academy of General Practice advises that its Board of Directors in September, 1965, adopted a statement discussing physician participation in the Federal Medicare Program, that as regards its professional association of family physicians dedicated to continuing education, in the future as in the past, will seek to provide the highest quality of comprehensive medical care for America's families, including both the young and the aged; that, historically, the Academy has vigorously opposed the intervention of the Federal Government in the provision of medical care; that, since Medicare is now law, it stands ready to confer with government agencies and others to assure, under the law, its patients will continue to receive the highest possible quality of medical care without any interference

with the vital personal relationship between family physicians and their patients; and that the Academy does not have the right to direct its individual members in the position they will take with respect to this new situation, each to make his own decision as to the degree of his participation in the Program. RECEIVED.

Oregon — AMA Trustee Candidacy

Oregon Medical Association, by action of its House of Delegates, September 24, 1965, endorsed Max H. Parrott, M.D., for Trustee of the American Medical Association. Arizona active supported invited. RECEIVED.

AMA Conference — Federal Medical Assistance Programs

Designated Paul B. Jarrett, M.D., President-Elect (Phoenix), and Arthur V. Dudley, Jr., M.D. (Tucson), as this Association's official representatives to the National Conference on Federal Medical Assistance Programs (at AMA expense) to be held Thursday and Friday, January 20 and 21, 1966, in Chicago, Illinois.

OTHER BUSINESS

Industrial Commission — Psychiatric Advisory Board

Received report of the Industrial Relations Committee, acting as Medical Advisory Board to the Industrial Commission of Arizona, setting forth psychiatric problems dealing with industrial work, recommending that cases first be referred to the psychiatrist member of the Medical Advisory Board. Following his review and presentation of findings to the Medical Advisory Board, that Board will take one of the following actions: (a) see the patient at the MAB; or (b) refer patient to a psychiatrist for an inedependent opinion, following which the patient will then be seen by the MAB; or (c) refer patient to one of the member psychiatrists of the Psychiatric Advisory Board who will first do a comprehensive individual work-up, followed by presentation of the patient to the Psychiatric Advisory Board.

Administrative arrangements should be made so that the psychiatrists will be able to bill adequately for the necessary time to thoroughly investigate the patient before he is presented to the PAB. Most of these patients are extremely complex, and the usual consultation fee is not adequate for the amount of work that is usually required to work these patients up. The psychiatrist should be paid at an hourly rate for the additional time required above and beyond the usual psychiatric evaluation.

Inasmuch as many members of the PAB receive frequent subpoenas for hearing on the cases they are involved with, it is recommended that these subpoenas be confined to a specific time and day of the week, which the psychiatrist will plan to make available regularly, and therefore, not interfere with his other private practices. RECOMMENDATIONS APPROVED.

Recommendation of the Industrial Relations Committee, members of the Medical Advisory Board to the Industrial Commission, that they be reimbursed at the rate of $150.00 per day, those out of town to receive an additional $50.00 in expenses, approved.

Resolution No. 10 — "Non-Participation"

Counsel authorized to prepare an appropriate resolution in advance of and for introduction in the ArMA House of Delegates, April next, carrying out the action of this Board in meeting held September nineteenth last referable to rescinding Resolution No. 10 — "Non-Participation" — adopted by the House May 1, 1965, and substitution therefor the intent of the Board at the aforementioned meeting.

Blue Cross-Blue Shield

Counsel authorized to prepare a resolution for presentation to the House of Delegates in annual meeting, April next, reecommending the separation of (Administration of) Arizona Blue Cross and Arizona Blue Shield.

Technical Advisory Committee — Program for Aged

Appointed: Richard S. Armstrong, M.D. (Path), Tucson; Hal J. Breen, M.D. (P), Phoenix; John L. Cogland, M.D. (IM), Phoenix; Robert S. Ganelin, M.D. (PD), Phoenix; Robert J. Haley, III, M.D. (GP), Holbrook; Richard T. McDonald, M.D. (GS), Flagstaff; Charles W. McMoran, M.D. (GP), Sierra Vista; Marriner W. Merrill, M.D. (GS), Phoenix; Albert J. Ochsner, II, M.D. (ANES), Yuma; and Hermann S. Rhu, Jr., M.D. (OBG), Tucson, to serve as members of a Technical Advisory Committee to William J. Moore, M.D., M.P.H., Commissioner of the Arizona State Department of Health, in connection with the program for the aged.

Kerr-Mills Activation

Counsel reported the Speaker of the (Arizona) House is beginning to hold informal meetings with respect to activation of the Kerr-Mills Law, enacted this year, with the support of this Association. Question is raised as to the position of the Association at this time relative thereto in the light of enactment of P. L. 89-97 Medicare. Since, obviously, little information is presently available, it was suggested that Dr. Brewer, possibly along with Dr. Jarrett and/or Dr. Hamer, confer with Commissioner Moore and the Speaker of the House, Mr. Gilbert, to ascertain what the problem is and then report back to the Board. Until the facts are known, this Board is not in position to take a stand other than reaffirm its previous position. RECEIVED.

Medical Laboratories

Counsel advised that the pathologists are now considering a bill to license and regulate medical laboratories. When and at such time as the assistance of this Association is sought and a copy of the proposed bill is submitted, it will be reviewed by the Legislative Committee and its recommendation sought. RECEIVED.

MEETING ADJOURNED AT 3:30 P.M.

Charles E. Henderson, M.D.
Secretary

ad hoc Committee for Arizona Territorial Medicine Publication

Meeting of the ad hoc Committee for Arizona Terretorial Medicine Publication of The Arizona Medical Association, Inc., held Sunday, December 19, 1965, in the offices of the Association, Scottsdale, Arizona, convened at 10:30 a.m., W. Albert Brewer, M.D., Chairman, presiding.

ROLL CALL

PRESENT:

Drs. Brewer, W. Albert, Chairman; Flinn, Robert S.; Henderson, Charles E., Secretary; Jarrett, Paul B., President-Elect; Steen, William B.; Yount, Jr., Clarence E.; Miss Quebbeman, Frances.

GUEST:

Mr. Fireman, Bert, Arizona Historical Foundation.

STAFF:

Messrs. Carpenter, Robert, Executive Secretary; Robinson, Bruce E., Assistant Executive Secretary.

EXCUSED:

Drs. Bledsoe, Nelson C.; O'Hare, James E., President; Schoen, Roland F.; Mrs. McNamee, Dorothy, Advisory Member.

PURPOSE OF MEETING

Doctor Brewer stated that he called this special meeting for the purpose of discussing recommendations made by Mr. Bert Fireman about the final publication of the book "Medicine in Territorial Arizona."

Mr. Fireman related that his original concept of the purpose of the book had been in error and that as a result his recommendations have changed. His current suggestions were as follows:

1. Too much non-medical history was in the text.
2. The first section relating to the medicines used by the Indians needs more technical definition.
3. That the great number of doctors mentioned makes the narrative awkward and that fewer doctors should be mentioned, but more narrative should be given to those that are mentioned.

A general discussion followed on the avenues to be taken by the Committee. Doctor Brewer pointed out that there were three possible steps as follows:

1. That the book should be edited in depth which would mean that we could not publish in time for the 75th Annual Meeting.
2. That the book be completed with less than "sharp" editing and that we proceed as planned.
3. That Dr. Carroll edit the book working with Mr. Fireman as publisher. Dr. Carroll indicated this combination could result in getting the book out on schedule.

After polling the entire committee it was regularly moved and carried that the book be accepted with changes as mentioned, namely that some Chapters be shortened and certain sections be deleted with the idea that it be ready for the annual meeting.

PUBLISHER

Mr. Fireman suggested that the Arizona Historical Foundation would be interested in acting as the publisher.

Following an extensive discussion on the aspects of publishing, design and layout, it was moved and carried that Mr. Fireman and the Arizona Historical Foundation be the publisher with the following conditions:

1. Three thousand copies be printed to be paid for by the Association.
2. That eighteen hundred copies be delivered to the Association.
3. That twelve hundred copies be given to the Arizona Historical Foundation and that whatever is realized from the sale of these would be their fee for publishing.
4. That in the event additional printings were required (over and above the original three thousand), an arrangement would be made so that the Arizona Medical Association would benefit from such printing.
5. That the cost to this Association would be between $3.00 and $3.50 per book (three thousand copies). This figure is subject to confirmation by Mr. Fireman and agreement by The Arizona Medical Association, Inc.
6. That this Association would distribute:
 a. ArMA members' copies.
 b. Book reviewer copies.
 c. Author's copies.
7. That Mr. Fireman would provide a written contract setting forth the above prior to the approval by this Association.

COPYRIGHT

It was agreed that the book should be copyrighted in the name of the Arizona Medical Association and that a Library of Congress number should be obtained.

BOOK REVIEW

It was noted that Doctor Roland F. Schoen is in the process of writing a book review for publication in the April issue of ARIZONA MEDICINE.

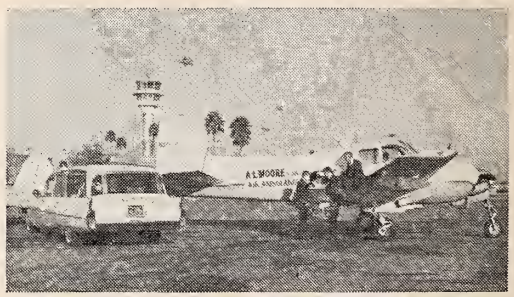
LEGAL OPINION

It was noted that the Board of Directors in meeting of December 12, 1965, approved the Asosciation's counsel review of that portion of the book dealing with the Keeley Institute.

Meeting adjourned at 12:20 p.m.

Charles E. Henderson, M.D.
Secretary

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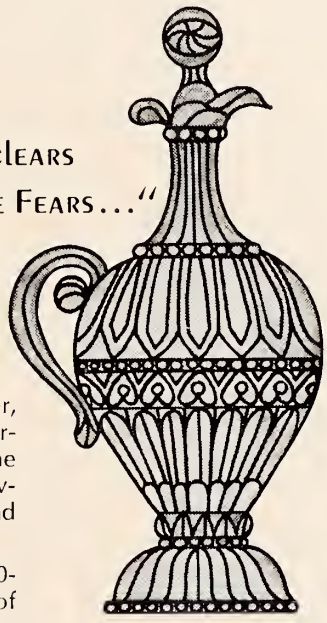
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By the way, Doctor: In your spare time (if any), are you a gourmet cook? Or do you insist that your wife be? If so (or if you just enjoy good food), our new cookbook, "ADVENTURES IN WINE COOKERY BY CALIFORNIA WINEMAKERS," is an absolute must in your kitchen library. We done it and we're proud of it. Our wives helped. It gives you more than 400 irresistible **easy** recipes. Just send us $2 per copy postpaid (we'd love to give it to you but it's too expensive). Makes a wonderful "thank-you-ma'am" or thoughtful gift. Makes doctors and their wives happy. Makes **us** and **our** wives happy. Thank you, Doctor, for listening.

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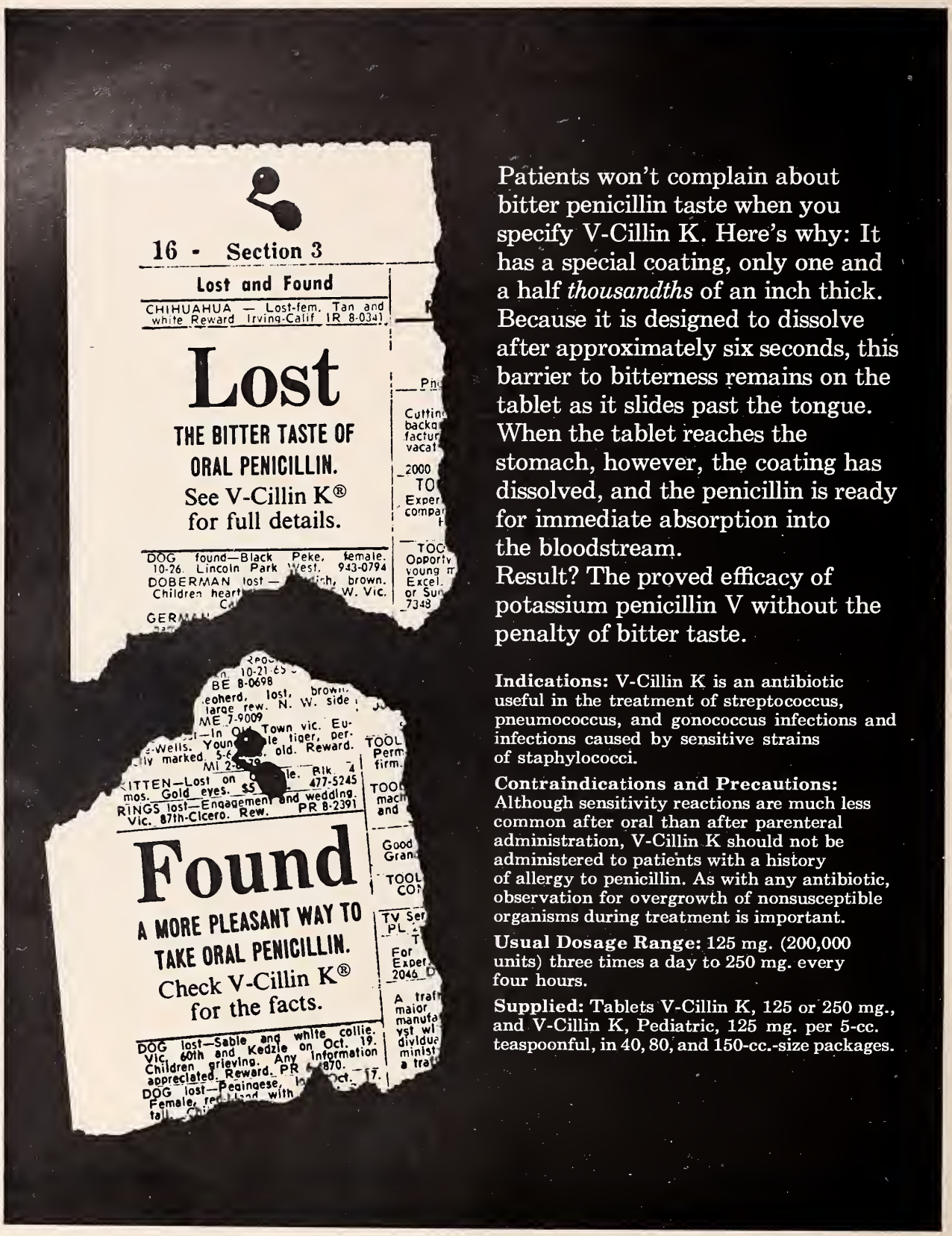
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Usual Dosage Range: 125 mg. (200,000 units) three times a day to 250 mg. every four hours.

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Autotransplantation of Kidney with Contralateral Nephrectomy in Dogs

MacDonald Wood, M.D.,*

William Price, M.D.,+

John Boyd, D.V.M.#

This study of renal autotransplantation is an excellent contribution to the ever expanding knowledge of tissue transplantation.

Transplantation of the kidney has been intensively studied since first performed by Carrel (1) and Ullmann (10) in 1902. A canine renal autotransplantation, as demonstrated by Murray (6) in 1956, can survive indefinitely without detectable impairment of function. A recent study by Hardy (3) was concerned with transplantation of the canine kidney for high ureteral injury. However, he had an operative mortality rate of 50% during the first 20 days, with only 11 chronic survivors of 48 animals studied.

Many investigators (2, 3, 6) indicate that transplantation of the kidney to the pelvis is more desirable than a cervical or renal fossa transplantation which requires a cutaneous ureterostomy, with the subsequent hazard of the ascending renal infection.

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Bilateral nephrectomy with immediate autotransplantation is preferable to unilateral nephrectomy with autotransplantation, and subsequent delayed contralateral nephrectomy. A lower mortality and morbidity rate, fewer complications (infection and wound dehiscence), and less time and expense favor a single operation (3).

In studying canine autografts, Kiser, et al (4), has obtained normal renal functions after extracorporeal ischemia of the organ for eight hours at 1-6°C. Starzl (9) has perfused canine kidneys from one to fourteen hours, under hypothermia, with the conclusion that cooling to less than 10°C. was harmful, and that the ultimate ideal temperature was 15°C.

PURPOSE OF STUDY

This study entailed autotransplantation of a kidney with contralateral nephrectomy in nine canines, using hypothermic perfusion of the transplant.

The significance of this study was the development of the operative technique to provide acute and chronic survivors for the subsequent study of homotransplantation, and to be the initial stage in the development of a technique for clinical application.

METHOD OF STUDY

Each of the canines was a female mongrel selected at random, ranging in age from eight months to seven years, and in weight from 35 pounds to 75 pounds. The preoperative preparation was immunization against rabies, distemper and hepatitis, deticking and intestinal purging, including worming. Preoperative medication was morphine sulfate 45 mg. and atropine sulfate 1.2 mg. given intramuscularly. The animal was anesthetized with intravenous pentobarbital 30 mg./kg., with supplemental doses as needed. A continuous intravenous drip of 5% dextrose in water was started, and a total of 1,000 ml. was given during the operative period and the subsequent 12 to 18 hours. An endotracheal tube was inserted to maintain an airway.

The dog was placed on the operating table on her back, and the entire abdomen was prepared by clipping the hair and by cleansing with soap, water and alcohol. All but the midline of the animal was covered with sterile drapes. The operators wore caps, masks, sterile gowns and gloves.

A midline incision was made from xiphoid process to the symphysis. The fatty falciform ligament was excised to facilitate closure of the peritoneum. Exploration was directed to the left renal vascular pedicle to determine the arterial and venous architecture. In eight dogs there was a single renal artery at the aortic origin, and this kidney was selected for the transplant. One dog had a double left renal artery; however, the right kidney, which had a single renal artery, was used for the transplant.

The superior and lateral peritoneum around the kidney was divided. The renal artery and vein were freed of all surrounding tissue for a distance of two centimeters at the aortic and caval ends. One horn of the bicornuate uterus, when present, was carefully reflected medially from the lower pole of the kidney. Great care was taken to retain the fatty tissue medial to the hilus of the kidney and along the upper ureter in order to preserve the ureteral arterial branches from the renal artery. The ureter was mobilized below the brim of the pelvis.

The opposite iliac vessels were dissected free. The hypogastric vein was divided to give greater length to the iliac vein, and the external iliac artery was mobilized to the level of the inguinal ligament.

A right nephrectomy was done, individually ligating the renal vessels and the ureter. A left nephrectomy was performed. This kidney was perfused through the artery with 5% dextrose (500 ml. containing 0.5 Gm. of procaine and 25 mg. aqueous heparin) at 15°C., under a pressure of 100 mg. mercury, until the kidney was contracted, pale and cold and the venous flow was clear and colorless (Figure 1). This took approximately 150 ml. of solution over a two to three minute period.

The kidney was transplanted to the right iliac fossa, and was rotated to place its former posterior surface anteriorly. This facilitated performance of the anastomoses, vascular first and ureterovesical last. End-to-end anastomoses, using 6-0 "DARCEL" (SeRel)*, were made between iliac vein and renal vein, and between iliac artery and renal artery (Figure 2-A). Upon release of the occluding vascular clamps, the kidney immediately returned to normal color and size, and urine flow was noted within three to five minutes.

Before opening the bladder, a urine specimen was aspirated with a syringe and needle. The ureter was placed through the lateral bladder muscle and along a submucosal tunnel. The end of the ureter was "fishmouthed" and was sutured to the bladder mucosa with 5-0 plain catgut producing a nipple-like end. (Figure 2). No catheter or stent was placed. The bladder was closed in layers with 5-0 plain catgut. To prevent torsion, the kidney was held in place with silk sutures approximating the renal capsule to the peritoreum of the iliac fossa.

The abdominal wound was closed with continuous 2-0 chromic catgut in the peritoneum, interrupted O "Iodized" gut (Lukens)** in the fascia, and continuous nylon (Vetafil)*** in the skin. No abdominal dressing was applied.

No drainage was instituted. Mannitol and low molecular dextram were not used in this study.

GENERIC TERMS

Pentobarbital — Nembutal
Sodium Heparin — Heparin Sodium, Liquaemin Sodium

*"DACREL" — SeRel Inc., Pasadena, California.
**"Iodized" gut, C. DeWitt Lukens Co., St. Louis, Missouri.
***Vetafil, Synthetic nylon, Dengen, Germany.

Transfusion of blood was not necessary. The operative time was from two-and-one-half to three-and-one-half hours.

In the postoperative care the dog received sedation as needed, and 600,000 units of Penicillin-G daily for three days.

Laboratory evaluations included a complete blood count, urinalysis, and a blood urea nitrogen determination. In addition, a creatinine clearance test and aortogram were performed on each of the chronic survivors.

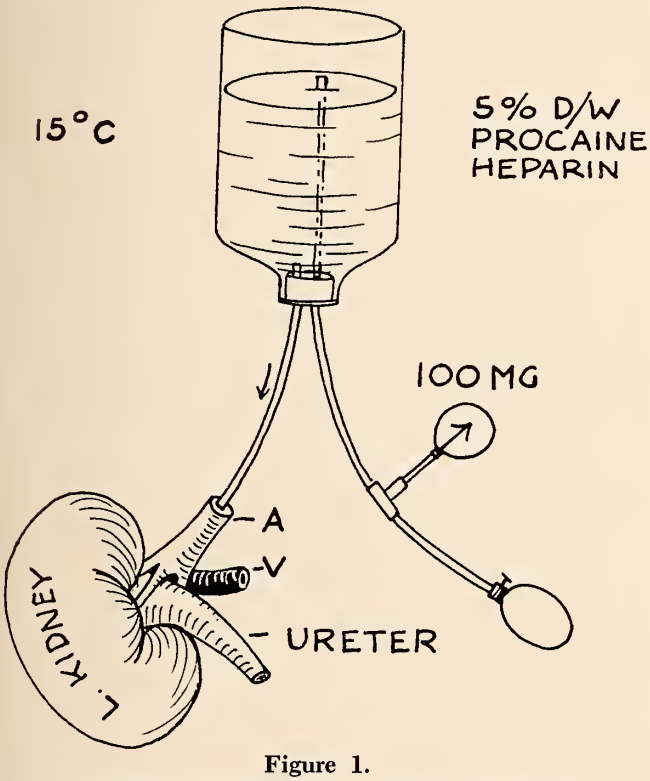


Figure 1.
Hypothermic perfusion of kidney transplant.

RESULTS

Of the nine canines that underwent autotransplantation of a kidney with contralateral nephrectomy, five (56%) died; four within two weeks, (third, fourth, twelve and twelfth days post-transplant), and the other, thirteen-plus weeks (96 days) after transplant. Four (44%) have been chronic survivors from twelve to fourteen months; all are healthy appearing and vigorous.

Age, Weight and Ischemia Times: (Tables I & II)

Though the average age of the animals at the time of the operations was ten months older in the survivor group; (Survivor group – 35 months; Dead group – 25 months), the weight of the animals was not significantly different; (Survivor group – 56 pounds; Dead group – 54 pounds). The average ischemic time of the transplanted kidney, i.e., the period from occlusion of the renal vessels until flow was established by anastomosis, was essentially the same for animals that survived or died; (Survivor group – 29 minutes; Dead group – 31 minutes).

Control Kidney:

The control kidney (the kidney removed at the time of transplant) was normal in each of the survivors. However, two of the five fatalities had significant pyelonephritis, both in the control kidney, and in the transplanted kidney.

Azotemia:

The early failures had a sharp rise in the blood urea nitrogen (Dog 1, BUN 200 mg.%; Dog 3, BUN 160 mg.%), with anuria and leukocytosis that persisted until death. One animal (Dog 7), sacrificed at twelve weeks, had severe cachexia, anuria and coma (BUN 80 mg.%). One of the chronic survivors (Dog 2) demonstrated an initial sharp elevation of the blood urea nitrogen (BUN 108 mg.%), and leukocytosis that gradually returned to normal in fourteen months. Another survivor (Dog 4) had an initial elevation (BUN 42 mg.%) before returning to normal levels. The transient elevation probably represents, according to Hardy and Eraslan (3) . . . "the deleterious effects of the temporary hypoxia to which kidney was subjected during transplantation."

Cause of Death:

Each animal that died was anuric (Table III). Dog 9 died on the fourth day post-transplant with peritonitis. Dog 5, an old obese dog with a bleeding tendency and pyelonephritis, died with arterial infarction and secondary peritonitis. Dogs 1 and 3 died twelve days after transplant due to obstruction at the ureterovesical anastomosis; Dog 3 also had pyelonephritis. Dog 7 was healthy until uterine enlargement, due to pregnancy, produced torsion of the renal vascular pedicle, anuria and death.

The causes of death (Table IV) were ureterovesical obstruction at the anastomosis with edema, hemorrhage, and stenosis, in two animals; renal infarction due to vascular thrombosis in one; torsion of the renal vascular pedicle due to uterine enlargement (pregnancy) in one; and peritonitis in one.

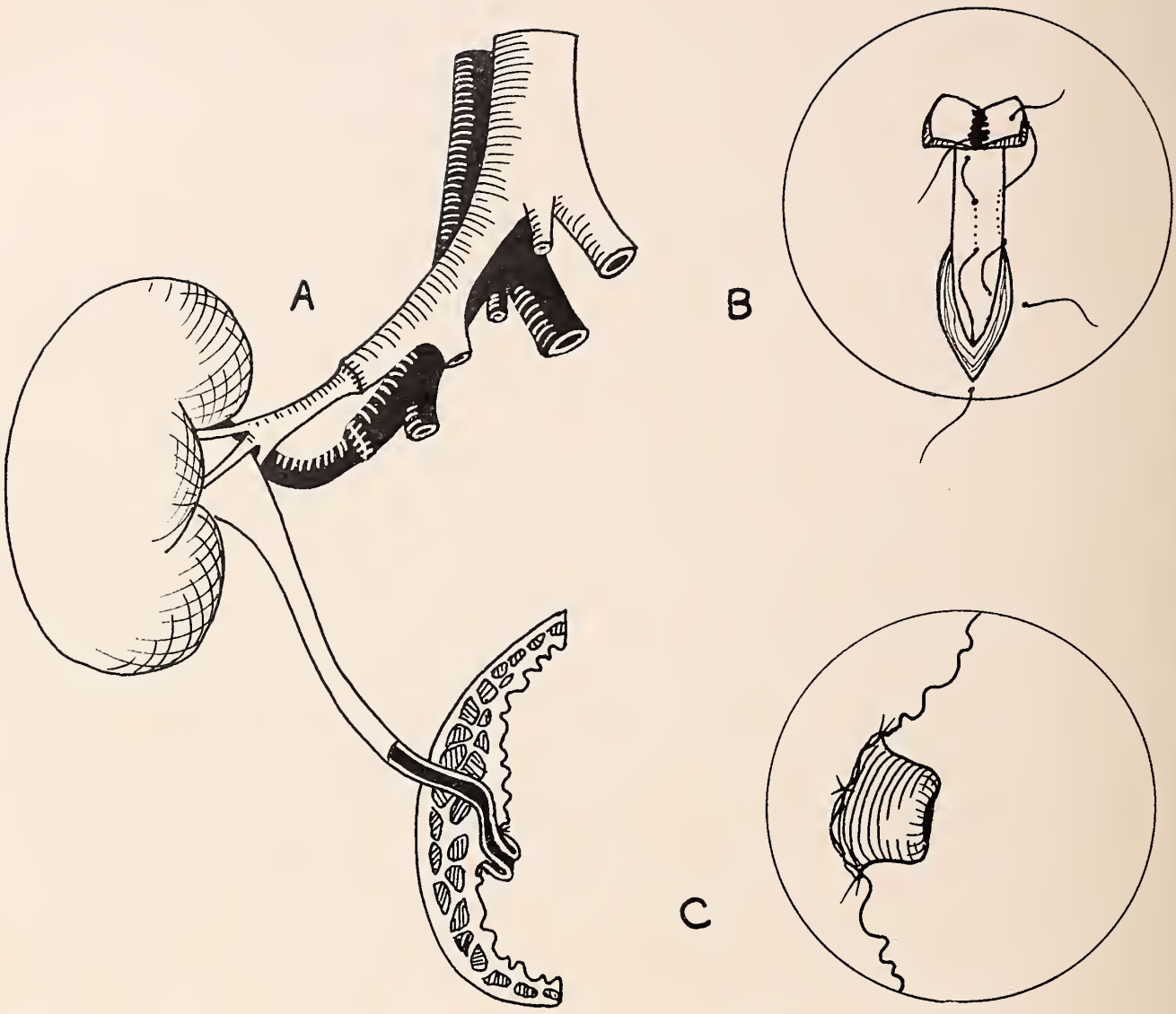


Figure 2.

Completion of kidney transplant. A. End-to-end arterial and venous anastomoses, and submucosal bladder tunner for ureter. B. Position of vesico-ureteral sutures. C. Completed uretero-vesical nipple-like opening.

TABLE I
DATA ON SURVIVORS

Dog No.	Age	Weight (Lbs.)	Ischemia Time (Min.)	Result
2	6 yr.	63	37	Alive 14 months
4	9 mo.	50	29	Alive 13 months
6	1 yr.	50	27	Alive 12 months
8	4 yr.	60	24	Alive 12 months
	35 mo.	56 lbs.	29 min.	(Average)

TABLE II
DATA ON FATALITIES

Dog No.	Age	Weight (Lbs.)	Ischemia Time (Min.)	Result
1	15 mo.	41	38	Died—12 days
3	8 mo.	46	32	Died—12 days
5	7 yr.	65	30	Died— 3 days
7	9 mo.	75	26	Died—13 weeks
9	9 mo.	35	30	Died— 4 days
	25 mo.	54 lbs.	31 min.	(Average)

PATHOLOGY

Microscopically, most of the control kidneys had evidence of dystrophic tubular calcification. However, this is essentially a normal finding in canines. Two kidneys (Dogs 1 and 5) demonstrated pyelonephritis.

The transplanted kidneys of Dogs 1 and 3 developed hydronephrosis with ureterovesical obstruction, anuria and death. No urine was present in the bladder, but 40-50 ml. were present in the dilated renal pelvis. On microscopic examination there was tubular dilatation, and foreign body reaction with edema and hemorrhage surrounding the catgut sutures at the ureterovesical orifice. Both animals died on the twelfth post-transplant day.

Cortical necrosis with neutrophil infiltration and loss of nuclei in the tubules indicated a renal arterial infarction in Dog 5, that caused death on the third post-transplant day.

One animal, (Dog 7) did very well with no complications until anuria developed, with death on the 96th post-transplant day. On pathological examination there was torsion of the renal vascular pedicle from uterine enlargement due to pregnancy.

In none of the animals that died or survived was vascular or ureterovesical leakage present. Bowel obstruction or intussusception was not seen.

RENAL FUNCTION OF SURVIVORS

Aortograms were done on the survivors (eight to ten months post-transplant), with percutaneous left femoral arterial catheterization (Seldinger technique) using 20 ml. of 50% Urokon, and rapid injection with a hand injector (Figure 3). Although an adequate pyelogram was not demonstrated, prompt dye filling of the bladder was noted without evidence of dilatation of the ureter or renal pelvis. Good filling of the renal artery was seen in each animal with evidence of minimal arterial narrowing in only one. Good arterial flow was present in Dog 2 at the time of an elevated BUN (53 mg.%); this suggested that renal disease; e.g., pyelonephritis was most likely the cause of the azotemia. However, normal creatinine clearance and blood urea nitrogen test were noted fourteen months post-transplant.

Each of the survivors had good creatinine clearance studies and normal blood urea nitrogen determinations at twelve to fourteen months post-transplant (Table V).

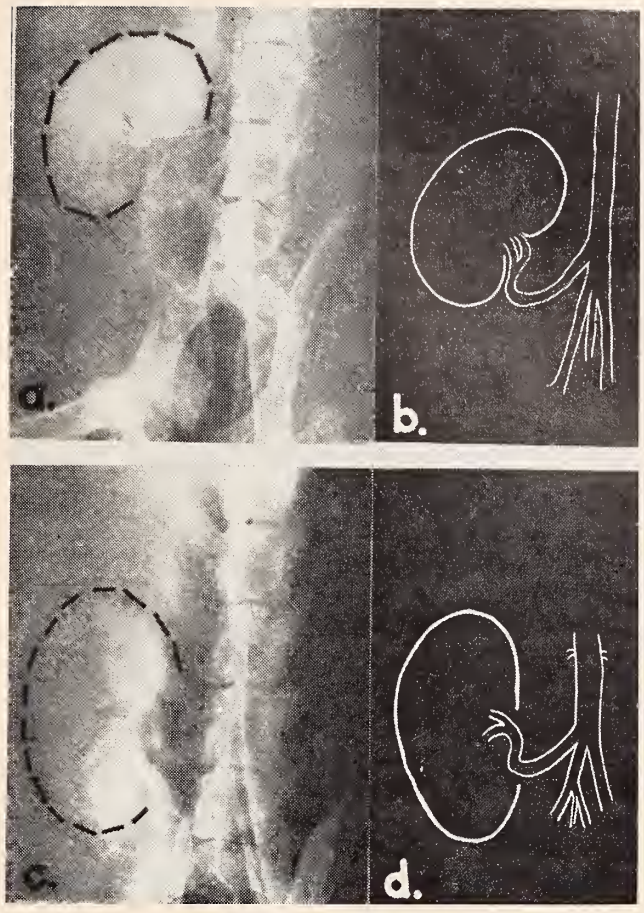


Figure 3.

Aortograms, arterial and renal outlines. Top, (a & b) Dog 6 ten months post-transplant. Bottom, (c & d), Dog 4 eight months post-transplant. Good filling each arterial tree with no anastomotic narrowing. Prompt dye emptying into the urinary bladder, Figure 1 (a).

TABLE III
DATA CONCERNING DEATHS

Bleeding tendency

Dog No.	P.O. Day	Findings	Comment
5	3	Anuria Peritonitis Infarction	7 year, obese, Bleeding tendency, Pyelonephritis control kidney, Preop BUN 31 mg.%.
9	4	Anuria Peritonitis	
1	12	Anuria	Ureterovexical obstruction,
		Hydronephrosis	Pyelonephritis control kidney.
3	12	Anuria Hydronephrosis	Ureterovesical obstruction.
7	96	Anuria Torsion vasc. pedicle	Pregnancy

DISCUSSION

Application of renal transplantation can be directed not only for replacement of diseased kidneys, but for reimplantation of kidneys when associated high ureteral injuries occur (3).

Lapchinsky (5), Pierce and Varco (7) prefer transplantation to the neck of the dog with cutaneous ureterostomy, whereas Dempster (2), Murray, et al (6), and Hardy and Eraslan (3) favor an internal ureterocystostomy. We selected transplantation of the kidney to the pelvis with ureterocystostomy, to avoid the need for revision of cutaneous ureterostomies and the hazard of ascending infection.

A single operation was performed with removal of one kidney and transplantation of the other. In our series no wound infections, or dehiscences occurred, and with careful hemostasis no transfusions were needed.

Anomalous renal vessels dictate which kidney to transplant. Reis and Tepe (8) reported the incidence, in dogs, of multiple renal arteries arising from the aorta was 0.6 per cent on the right and 13.2 per cent on the left. And the incidence of multiple renal veins draining into the vena cava was 1.0 per cent on the right and zero on the left (8). Only one of our animals had multiple left renal arteries. The left kidney was more caudal and more accessible than the right, and was selected for transplant in eight animals.

TABLE IV
CAUSES OF DEATH

Ureterovesical anastomosis obstructed, edema, hemorrhage, stenosis	2
Renal infarction, vascular thrombosis	1
Torsion renal vascular pedicle, due to pregnancy	1
Peritonitis	1
TOTAL	5

Ligation of the iliac vessels, in a dog, does not impair function of the lower extremity because of the tremendous collateral vascular bed.

Deaths in reported studies (2, 3, 6) have been due to infection, wound dihiscences, thrombosis of renal artery or vein, ureteral obstruction at the anastomosis, and relative inexperience of the participating operators. The procedures in our series were performed by the senior author (M. W.) and a surgical resident (W. P.), which provided standardization in techniques. It was interpreted that three of the five deaths were probably due to technical errors.

Many investigators have not perfused or cooled the kidney prior to transplantation. Hardy and Eraslan (3) employed total body hypothermia to 30-32°C. and used internal shunts for arterial and venous anastomoses. Starzl (9) experimentally and clinically used renal arterial perfusion of a hypothermic (15°C.) mixture of 1,000 ml. of lactated Ringer's solution with 1 Gram of procaine and 50 mg. of aqueous heparin, and did a direct anastomosis of vessels without a shunt or a bypass.

TABLE V

RENAL FUNCTION TESTS OF SURVIVORS

Dog No.	Months Post-Op.	24 Hr. Urine Vol. in Ml.	Urine Creatinine Mg.%	Serum Creatinine Mg.%	Creatinine Clearance Liters/24 Hr.	BUN Mg.%	URINE Specimen
2	14	990	90	1.2	80.9	32	5-10 WBC/HPF
4	13	1240	73	1.4	64.7	20	NEG.
6	12	440	155	0.8	85.2	25	4-5 WBC/HPF
8	12	610	470	3.1	92.5	16	NEG.

SUMMARY AND CONCLUSIONS

Autotransplantation of the kidney with contralateral nephrectomy in nine dogs has been studied. There were four (44%) chronic survivors from twelve to fourteen months.

The transplanted kidney was placed in the pelvis with anastomosis to iliac vessels and with ureterocystostomy. Hypothermic perfusion (15°C.) of the transplant kidney was done in each animal. The ischemic time for the transplant was an average of 30 minutes.

Three of the five deaths were probably due to technical errors, ureteral obstruction in two, and thrombosis of the renal vessels in one. One death was caused by renal pedicle torsion due to uterine pregnancy. Two animals that died had had pyelonephritis in the transplanted kidney.

Of the four survivors, two had transient initial azotemia, oliguria; and leukocytosis. All of the animals are active and have good renal function as demonstrated by renal arteriography, urine, blood urea nitrogen and creatinine clearance evaluations.

Pregnancy, producing torsion of the vascular pedicle of a transplanted kidney to the pelvis, has not, to our knowledge, been previously reported. Of interest, one of the survivors (Dog 2) terminated a full term pregnancy with delivery of seven healthy pups and has maintained normal renal functions.

The personal experience gained in our laboratory has provided us an opportunity for evaluation of technique, postoperative management, and observation of long term survivors. Our results parallel those reported by other investigators. Improvement in the number of chronic survivors could be accomplished by a better selection with preoperative renal function studies.

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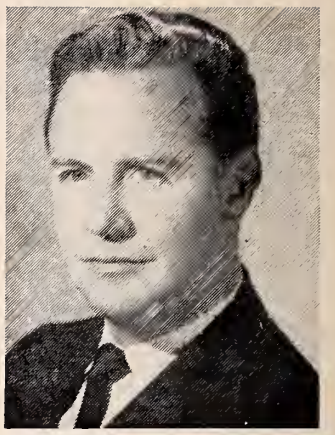
ACKNOWLEDGMENT

Pathologic and roentgenographic assistance was provided by the Department of Pathology and the Department of Radiology. Medical drawings were by Eugenia Paul.

GENERAL PRACTITIONERS' RESPONSIBILITY

May I earnestly recommend, therefore, that general practitioners assume as a professional responsibility the obligation of recording their personal experiences with individual drugs. It is my hope that they will pass along their conclusions, based on collective experiences, to the companies who develop and produce those drugs. It is also my hope that they will pass along such data to the Food and Drug Administration when and if the occasion warrants. May I reiterate that as members of a great profession general practitioners have a responsibility not only to their patients today, but the patients of tomorrow and to the most important mission on earth, the discovery of new agents to conquer the still unconquered diseases that — afflict mankind. — Theodore G. Klumpp, M.D. in *GP*, (32:211), November 1965.

Mitral Commisurotomy in Children
A Clinical and Surgical Evaluation



J. Espino-Vela, M.D., F.A.C.C.

Dr. Espino-Vela has well documented the superb work being done in the National Institution of Cardiology, Mexico City. This paper represents a major contribution in precise diagnosis of mitral stenosis in a youthful age group and in the selection of such patients for cardiac surgery. The theory on the etiology of "silent" mitral stenosis is most interesting. An overall cure rate of 75 per cent is impressive in this difficult disease problem. Dr. Espino-Vela was President of the Mexican Society of Cardiology in 1965.

Introduction

Rheumatic fever and rheumatic heart disease in Mexico City have been major problems which go beyond the purely medical realm and have become a truly social problem. While their incidence has gradually declined, rheumatic heart patients account for no less than 30% of the patients studied at the Instituto Nacional de Cardiologia in Mexico City; 15 years ago this figure reached as high as 42%. It is not surprising therefore that all types and degrees of valvular damage are seen. By and large, I believe that the involvement of the heart in our city is comparatively more severe and extensive than is reported to occur in other cities of the world.

Head, Dept. of Pediatric Cardiology
Instituto Nacional de Cardiologia
Mexico City, Mexico
Presented at the Ninth Annual Meeting of the Medical Society of the United States and Mexico, Dec. 9-12, 1964.

As cardiac surgery has advanced, both clinicians and surgeons have become bolder in the selection of operable mitral patients. No longer are the "pure mitral stenoses" the only patients who benefit from surgery, nor are the young or middle aged adults the selected group.

This report is based on 27 children who had mitral rheumatic heart disease and underwent surgery with the closed technique.

Material. Analysis

There were 17 females and 10 males. Their ages ranged from 10 to 16 years. Their clinical history and laboratory data were carefully analyzed. These included X-ray, electrocardiogram, phonocardiogram (X-R, ECG, PCG) and in approximately one half of the cases, heart catheterization.

Results

All the available data were evaluated prior to surgery.

A. Clinical data

1. Rheumatic activity

Nine cases had a true history of rheumatic fever, i.e., polyarthritis and two more had a history of Sydenham's chorea. Twelve cases had minor manifestations: tonsillitis, joint pains, muscular pains, torticolis, etc. The remaining six had no history of any sort pertinent to the cardiac problem. All were diagnosed as having either a "pure" or a predominant mitral stenosis.

2. Tolerance to exercise.

In general it is difficult to evaluate this feature in children. Most of our patients were symptomatic and suffered dyspnea on effort. One half had paroxysmal dyspnea. Two suffered from easy fatigability. Three had evidence of congestive failure. Venous capillary hypertension was present in nearly every case as substantiated by marked dyspnea and in several instances, by cough and hemopthysis.

3. Physical examination.

A few patients exhibited that peculiar shade of cyanotic redness of the cheeks so characteristic of many mitral patients. There were signs of pulmonary hyptertension over the precordial area: P2 was accentuated always. On occasion a systolic click was heard over the pulmonary area. For the most part a clear diastolic rumble was heard. Three of them had a minimal diastolic phenomenon which some observers failed to hear. About one third of the cases had a short systolic apical murmur. When the diastolic rumble was hard to hear, the left recumbent position and the use of the bell of the stethescope proved valuable in bringing out the phenomenon.

B. Laboratory data

1. Streptococcal infection and rheumatic activity.

Every patient whether active or inactive was given a strong antistreptococcal treatment with penicillin. The only cases excepted were the six who had a negative history of rheumatic fever or equivalent manifestations. Most of those treated with penicillin had evidence of a streptococcal infection and five were active when admitted to our Institution. Steroids were used in these because of the severity of the picture. Every case was inactive clinically and otherwise when submitted to surgery.

2. X-ray.

a) Lungs. The hilar vascular markings were of the venous-arterial type in most cases. A frequent finding was a pleural fissure in the right lung. A mottled appearance of the lung fields was not uncommon. "B" lines were present in several instances at the costophrenic angle.

b) Heart. Slight to moderate cardiomegally was always present. The left atrium, the right ventricle and the pulmonary artery were the segments involved and enlarged. The left atrial appendage was frequently visible and prominent (fig. 1).

3. Electrocardiogram.

Left atrial and right ventricular enlargement were always present. There was always right axis deviation. The R wave in V1 was always tall and/or larger than the S wave, which gave high R/R+S indexes. In many cases there were deep S waves as far left as V5 and V6. $\bar{A}T$ was often directed to the left and posteriorly. (fig. 2)

4. Phonocardiogram (fig. 3)

Sixteen cases were thus studied. A most useful measurement was the delayed inscription of the 1st. sound at the apex. It was measured from the beginning of the Q wave in the ECG to the 1st. rapid vibrations of the first sound (Q-I interval). Normal values do not exceed 0.07". Our cases had values ranging from 0.085 to 0.09". There was a good linear correlation between the delay in the Q-I interval and the size of the mitral area estimated by the surgeon. The mean valvular area calculated was 0.32 cm^2. The longer the Q-I interval, the smaller the mitral area. A typical Duroziez murmur was present in nearly every case. Nine cases had a short apical systolic murmur. One case had an associated atrial septal defect and had a very soft apical diastolic rumble. Two more cases had minimal diastolic rumbles at the apex. It was in these that some observers could not hear the phenomena.

5. Catheterization findings.

Sixteen patients were studied. Six had mean pulmonary pressures ranging from 30 to 49 mm Hg (grade I pulmonary hypertension); seven patients had mean pulmonary pressures ranging from 53 to 68 mm Hg (grade II pulmonary hypertension); three had mean pulmonary pressures ranging from 75 to 80 mm Hg (grade III pulmonary hypertension). The mean pulmonary capillary pressure of the entire group ranged

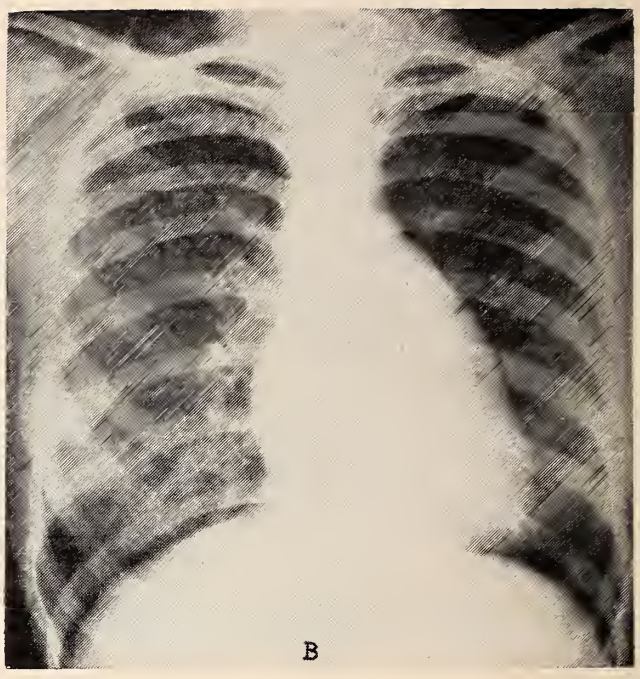
from a low of 20 to a high of 39 mm Hg. Pulmonary vascular resistances were under 500/dynes/sec/cm^5 in 7 cases; between 500 and 700 in one case and above 700 in 8 cases. The area of the mitral valve calculated for the 16 cases ranged from 0.2 to 1.5 cm^2.

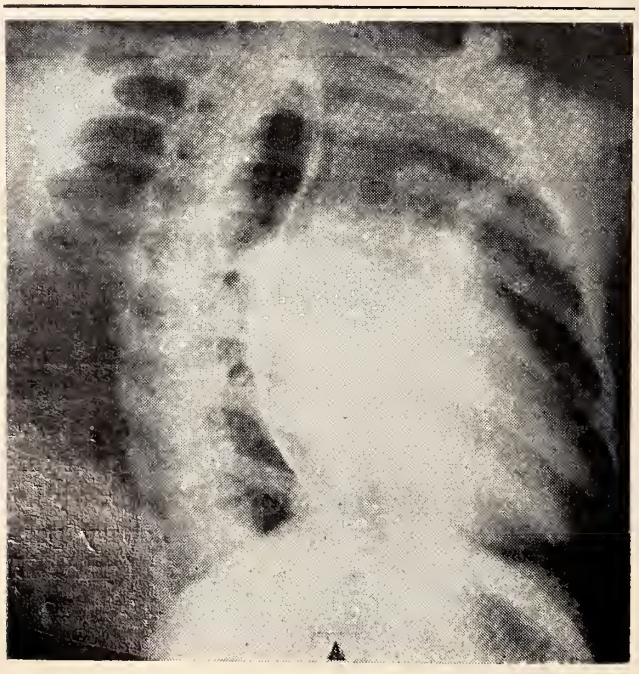
C. Surgical data.

Surgery took place between 3 months and 3.5 years after the last bout of rheumatic activity had subsided in the different patients. With the exception of one case, every patient was operated by way of a left posterolateral thoracotomy and a closed technique. One patient was operated from the right side to correct an associated atrial septal defect; the mitral valve was treated through the atrial opening. Six cases had a mitral valvular area slightly larger than 1 cm^2. Seven cases had areas ranging from 0.5 to 1 cm^2 and 14 had areas less than 0.5 cm^2. One case had a slightly calcified valve which was not predicted. Atrial thrombosis was never found.

Atrial appendage biopsies were obtained from 23 cases. Pulmonary biopsies from five. Eleven atrial appendage biopsies showed signs considered by the pathologist as evidence of rheumatic activity, i.e., Aschoff bodies, lymphocytic infiltration of the endocardium and the myocardium. Lung biopsies showed some arteriolar changes and signs of passive congestion; considerable thickening of the alveolar septum was also described.

Follow up periods ranged from 6 months to 8 years. The cases were divided into groups according to time and results as seen in Table I.





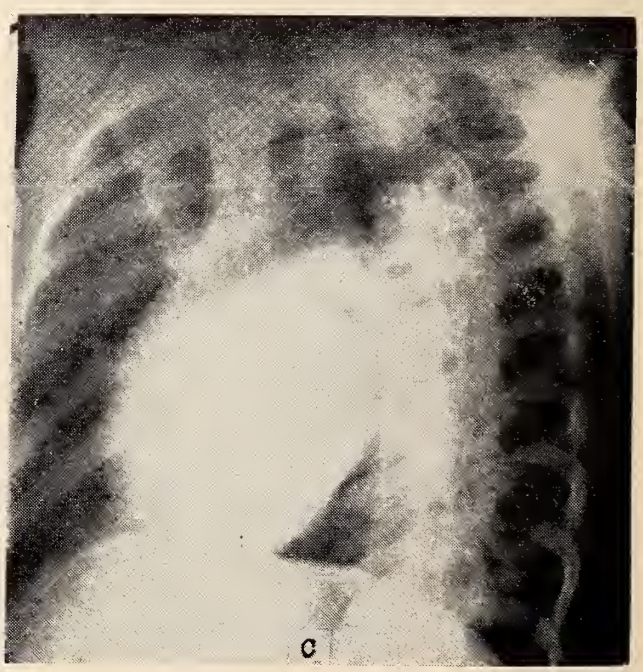


Figure 1

1. A, B and C, preoperative X-rays of a 12-year-old girl with "pure" mitral stenosis. Notice the left atrial enlargement in A, the elevation of the left bronchus in C and the third arch in the left contour of the frontal view.

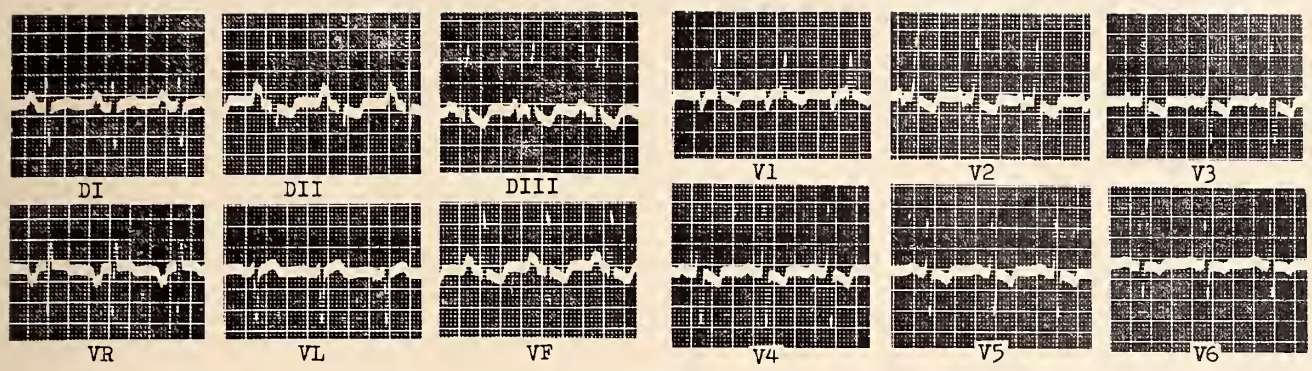


Figure 2

2. Preoperative electrocardiogram of a patient with a very tight mitral stenosis. Notice the M shaped P waves in leads I and II and the markedly diphasic P waves in VI and VL with tall R waves in these same leads. The tracing is suggestive of marked left atrial and right ventricular overloading.

TABLE I

Results	6-18 mo. P.Op.	18-30 mo. P.Op.	36 mo. to 8 years
I. Poor	A	B	C
II. Mediocre	A	—	BCD
III. Good	AB	C	D
IV. Excellent	A+7 cases	3 cases	5 cases

Group I. Case A was in heart failure 3 months after surgery. Case B died after surgery and never did well postoperatively. Case C ended as an exploratory thoracotomy because of a double mitral lesion with important regurgitation and atrial fibrillation.

Group II. Case A remained symptomatic with moderate dyspnea. Case B went into fibrillation (atrial). Case C had poor tolerance to exercise (group II of the New York Heart Association). Case D was left with mitral regurgitation postoperatively which was not present prior to surgery.

Group III. Case A had slight aortic regurgitation. Case B remains with a small apical systolic murmur not present prior to surgery. Case C developed atrial fibrillation postoperatively but made a good recovery and later did well. Case D developed a post-commisurotomy syndrome but recovered and is doing well.

Group IV. Case A had an associated atrial septal defect (Lutembacher's syndrome)

D. Postoperative data.

Clinically the diastolic murmurs became soft or disappeared. P2 returned to normal. In some cases the short systolic apical murmur became softer or disappeared. It increased in one case.

Radiologically the aspect of the lungs was improved, the hilar vascular markings having decreased as well as other features of pulmonary hypertension (fig. 1).

Electrocardiographically, some cases had striking changes. The P wave became normal; the right axis deviation disappeared and also the signs of marked right ventricular hypertrophy (fig. 4).

Phonocardiographically those cases who were studied postoperatively showed a shorter Q-I interval a few weeks after surgery (fig. 3). Other asucultatory phenomena decreased in intensity.

None of the patients have been recatheterized.

Discussion

For years cardiologists have pondered on the "mystery" of rheumatic mitral stenosis in the total absence of a positive history of rheumatic fever or some of the minor manifestations commonly encountered in heart patients with this involvement. This has led some to believe there is a different etiology for these cases — not congenital, however. When seen in adults these mitral patients frequently have a history of good tolerance to the disease. But the fact that at least one of our cases with no history of rheumatic fever had a positive atrial appendage biopsy leads us to regard these cases as truly rheumatic until proven otherwise. The early onset of symptoms, i.e., intolerance to physical exercise is worthy of notice both in these and in those patients who had a positive history of rheumatic fever. All had markedly stenotic valves.

Despite the preoperative antibiotic therapy one patient had early postoperative symptoms suggesting reactivation of rheumatic fever and was treated with steroids to which he responded quite well. In the light of our knowledge on

streptoccocal infections and in view of the vigorous antibiotic therapy given before surgery these "reactivations" should be regarded more as a post-commisurotomy syndrome, i.e., marked reaction to surgical trauma which yields to steroid therapy.

It is not surprising that marked dyspnea and pulmonary edema were present in some cases in view of the high venous-capillary pressure. But it is rather striking that youthful patients should develop such high pulmonary pressures both arterial and venous-capillary. While it is said that in some measure high arteriolar resistances "protect" the patient from dangerous episodes of paroxysmal dyspnea and/or pulmonary edema, this was not always the case in this short series of children. The explanation for absence of pulmonary edema in these patients with extremely high venous-capillary pressure (above 30 mm Hg) cannot easily be ascribed to "protection" by the arteriolar vasoconstriction but rather to some intrinsic mechanism at the alveolar wall, possibly the thickening described by the pathologist.

Clinical diagnosis has become quite accurate with the aid of instrumental methods which permit useful correlation. A short, soft, apical systolic murmur was never a contraindication for surgery. Indeed, minimal regurgitation did not influence the end result of commisurotomy since the basic problem remained mitral stenosis. One case amongst the 27 had more mitral regurgitation than was anticipated. Surgery was not satisfactory but the patient made an uneventful recovery. Nor did a slight associated aortic regurgitation alter the good results of mitral surgery in another patient.

In two cases the apical systolic murmur was moderate, while the diastolic rumble was almost inaudible. Such atypical cases pose a difficult problem. Actually, some observers in our ward at one time or another denied the presense of a rumble and of a mitral stenosis in these patients. Hence the designation of "silent" mitral stenoses.

The explanation for this is that there is an extremely low cardiac output because of the marked stenosis of the valve. It seems that under these circumstances, the absence of a diastolic rumble is understandable both because of the minute, rigid mitral orifice and because of the

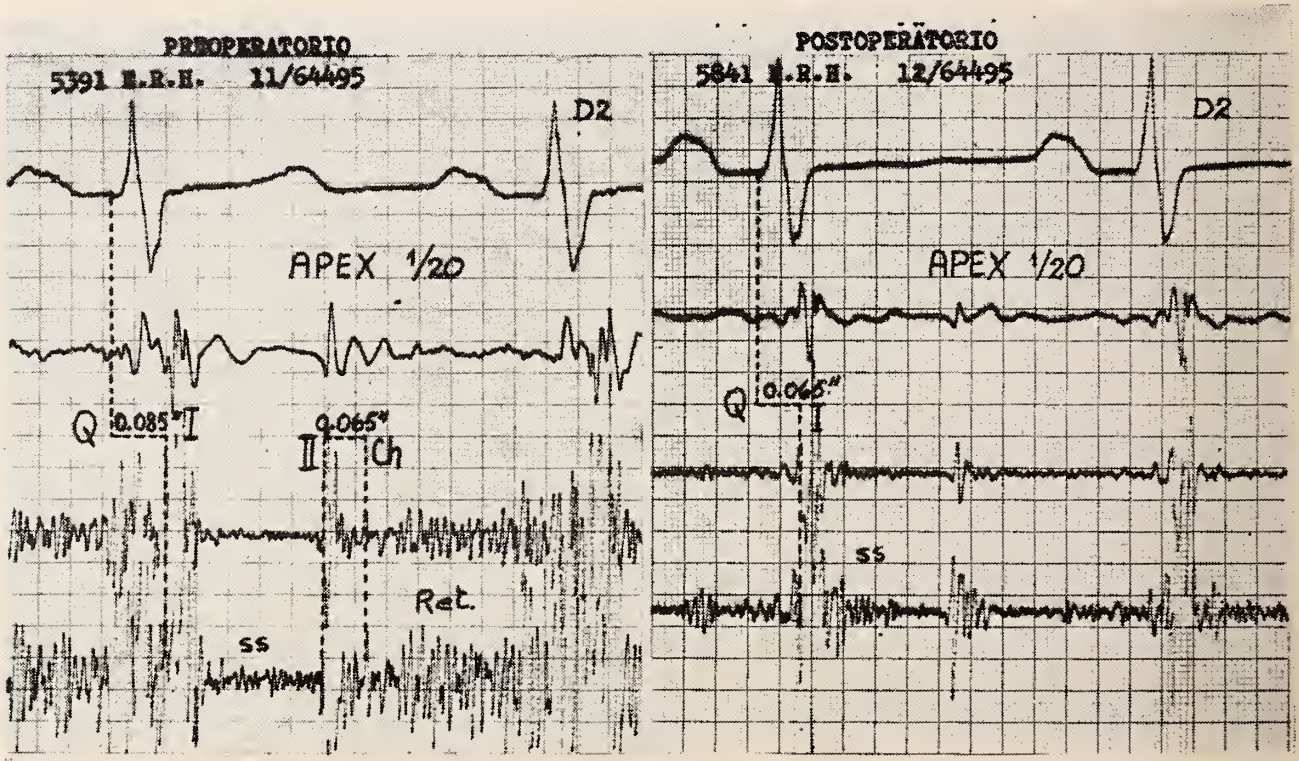


Figure 3

3. Phonocardiograms, pre and postoperative of a case of severe mitral stenosis. Notice the long Q-I interval in the left (preoperative) phonocardiogram measuring 0.085" thus denoting by inference, a mitral valvular area below 1 cm^2. The postoperative Q-I interval decreased to 0.065 which means great improvement of the area of the mitral valve.

relatively low intraatrial pressure, incapable of propelling blood through the valve with enough velocity to cause eddies, which might in turn produce audible vibrations. By the same token, a high pressure chamber i.e., the left ventricle is capable of causing slight mitral regurgitation and an audible systolic murmur produced at that same small rigid mitral orifice.

Some workers have found that these "silent" mitral stenoses with "apical" systolic murmurs have mild to moderate tricuspid regurgitation responsible for the murmur. Functional tricuspid regurgitation is not uncommon in mitral stenosis with high pulmonary pressure. In many instances it is part and parcel of mitral disease and it is reversible after commisurotomy. The explanation for this interpretation lies in the fact that tricuspid regurgitation is erroneously taken as mitral regurgitation if one considers that right ventricular hypertension leads to hypertrophy, dilatation and marked clockwise rotation of the heart with *displacement of the tricuspid area to the left.*

These "silent" or "semisilent" mitral stenoses must be fully evaluated in the light of all types of available data, both clinical and instrumental. Pulmonary hypertension stands out as one important feature to be evaluated and bespeaks of a tight mitral stenosis as follows:

Clinically by an accentuated P2, a pulmonary systolic ejection click and a history of severe degrees of dyspnea with nocturnal paroxysmal bouts and/or pulmonary edema.

Radiologically, by a mottled appearance of the lungs, which is the result of alveolar wall edema; "B" lines, which portray lymphatic hypertension and congestion; a visible pleural interlobar fissure due to edema of the pleura and a very prominent pulmonary artery and left atrial appendage. All of these have been excellent diagnostic aids in the establishment of the diagnosis of severe pulmonary hypertension and, by inference of a tight mitral stenosis.

Much the same can be said of the electrocardiogram, when it shows right axis deviation and marked right ventricular hypertrophy with high R/R+S values and right ventricular morphologies in the left precordial leads. The higher the pulmonary pressure as determined by cardiac catheterization the more evidence of right ventricular patterns over more precordial leads.

An excellent tool in our Institution which allows us to consider catheterization unnecessary in many of these cases (more so as time goes by) is the PCG especially as regards the information derived from the combined use of the ECG. The best correlation springs from the measurement of the Q-I interval and the size of the mitral area found at surgery. The longer this interval the tighter the mitral stenosis. This correlation follows a very distinct linear pattern. By inference, obviously one should expect a very small mitral area the longer the Q-I interval.

When the mitral valve narrows to an area under 1 cm^2 the mean atrial pressure becomes elevated. Graphically speaking, the normal relationship of the atrial and ventricular pressure curves becomes altered, the former curve coming to lie at a higher level and at a later timing. Thence the later inscription of the volume-pressure phenomena with relation to the electric arrival of the activation process. Also, the delayed appearance of the first sound with respect to the Q wave of the electrocardigram. On clinical grounds the finding is well known to clinicians who are able to see and/or feel the mechanical

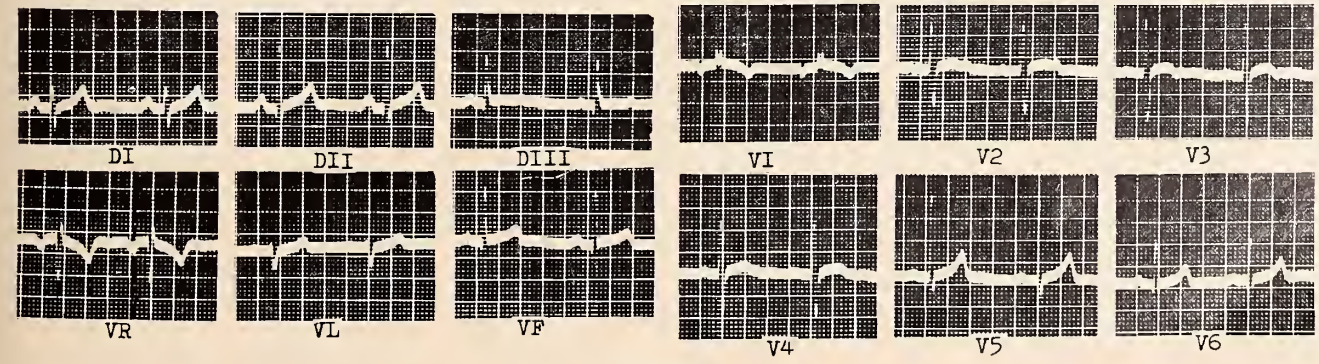


Figure 4

4. Postoperative electrocardiogram of same patient of fig. 2. Notice how the right axis deviation is much less marked; the P waves have become nearly normal and the R wave in VI is now an M shaped complex of much lower voltage than preoperatively.

apical impulse before they hear the first sound at the apex. Expressed in different terms, the explanation offered by some seems adequate: a) The mitral valve leaflets take a longer time to close because of the longer distance they must travel from the low position they have at the end of diastole. This is due to a delayed filling time of the left ventricle by virtue of the tight mitral stenosis. b) It takes longer for the left ventricle to build up enough pressure to balance that within the hypertensive left atrium. Thence the delayed closure of the valve with respect to the electrical stimulation of the heart muscle.

As long as the diagnosis of pure or predominant mitral stenosis is correct it is reasonable to expect good results after surgery. Yet, some features have a bad influence on the expected outcome, either because they complicate the picture or because they go unnoticed preoperatively. In this series three fourths of the patients did very well after surgery. Poor or mediocre results were seen in patients with one or some of the following features:

1. The presence of a double mitral lesion with predominant insufficiency. One case had a poor result because of this and died. This was the only death.

2. Atrial fibrillation. If present preoperatively surgery proved of little help. It may be that in this young age group, the low cardiac output of mitral stenosis combined with the low output which characterizes atrial fibrillation plus the surgical trauma lead to such poor results.

3. A history of heart failure was obtained in four cases considered to have had poor results after surgery. They subsequently developed heart failure again. Apparently or perhaps unquestionably, heart failure and fibrillation prior to surgery bespeak of a very poor cardiac reserve and markedly advanced myocardial changes.

4. The surgical production of mitral regurgitation is definitely deleterious for the patient as seen in one of our cases. Under a closed technique, it is understandable that a good job cannot be done with a simple commissurotomy since while the stenosis is relieved, excessive opening of the valve may result in marked regurgitation. It is fortunate that only one case had this complication.

Of interest in this series was the pinpoint size of mitral orifices in some cases of "silent" stenosis. This appraisal by the surgeon is in agreement with the explanation offered above on the markedly reduced cardiac output of these hearts. Although quite uncommon, another interesting finding was the only case with a calcified valve, so rare a feature in children. It was also fortunate that intracardiac thrombosis were never present. While this feature is a new finding in our experience, one might venture to predict that in the absence of a history of peripheral emboli it is expected that no thrombi will be found in the left atrium in children. This of course is subject to further observation and a larger experience.

The time for operation has always posed a difficult problem because, as some workers maintain, surgery in children meets obstacles which the adult has in some measure overcome, namely, the possibility of future rheumatic attacks and the production of added valvular damage. In addition there is the possibility of rheumatic activity in some patients who had just recently recovered from an active stage of rheumatic involvement of the heart. Nevertheless when symptomatology, especially that caused by severe pulmonary hypertension was very obvious, we decided to send these children to surgery not more than three months after all evidence of clinical activity had subsided. Some of course waited longer for other reasons. All the laboratory information was indicative that no activity was present when surgery was performed.

The presence of Aschoff bodies in the atrial appendage biopsies may not mean that there is rheumatic activity. We are convinced that it is merely evidence of rheumatic involvement. Only lymphocytic infiltration of the endocardium or myocardium bespeak of some degree of active infection. After vigorous therapy instituted preoperatively this came as a surprise to the clinician but even so, true reactivation of rheumatic carditis was rare and not necessarily present in these cases. Postcommisurotomy syndrome as has been said, is more in keeping with the facts obtained in this series.

In the future we would avoid surgery in patients with atrial fibrillation or at least be very careful about sending them to surgery. Cases with a history of cardiac failure may well be another group of *undesirable* candidates for surgery. Predominant mitral regurgitation of course, calls for a different type of surgery with open technique. This careful selection should improve our good results from 75 to perhaps more than 90%.

Summary

This is a series of 27 children aged 10 to 16 years who underwent mitral commisurotomy with the closed technique. They were evaluated prior to surgery in the light of a clinical appraisal and with laboratory data including X-ray, ECG, PCG and right heart catheteization. Notwithstanding the exeellent information derived from the latter method, careful analysis of the other sources of information give a very clear picture of the hemodynamic situation especially as regards arterial and venous-capillary hypertension, present in every patient of this series. Good and excellent results were obtained in 75 percent of the cases even when pinpoint mitral stenosis was found. Some were "silent", i.e., lacking a clearly audible diastolic apical rumble. Poor results (only one death) were seen in cases who had atrial fibrillation, a history of heart failure or predominant mitral regurgitation (one case). Careful selection should improve these results and bring the good and excellent percentage figures close to 100%.

Since the presentation of this paper, three well documented cases of "pure" mitral stenosis have been operated. They belong to three boys ages 13, 13 and 12. None of them had a history of rheumatic fever. All three had a tight mitral stenosis which measured around 0.5 cm^2. They all had typical Duroziez murmurs at the apex. One had a calcific node discovered by the surgeon. All had clinical and radiological as well as electrocardiographic data compatible with severe pulmonary arterial hypertension. Finally, one of the patients had a cerebral vascular accident as a result of which he suffered from permanent right-sided hemiplegia and aphasia. No thrombotic elements were found in the left atrium and atrial fibrillation was not present either in this case nor in the other two. All had excellent postoperative results after mitral commisurotomy done with the closed technique.

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RESUMEN

Se presenta una serie de 27 niños entre los 10 y los 16 años de edad, quienes fueron objeto de comisurotomía mitral con la técnica de corazón cerrado. Se les valoró en el pre-operatorio desde los puntos de vista clínico y de laboratorio, inclusión hecha de rayos X, electrocardiograma, fonocardiograma y cateteris mo derecho.

Si bien el cateterismo proporciona excelente información hemodinámica un análisis cuidadoso de otros datos proporciona una idea muy detallada de la situación hemodinámica y en particular, en lo que se refiere a la hipertensión arterial pulmonar y venocapilar pulmonar que se hallaron en todos los casos de esta serie. Se obtuvieron resultados quirúrgicos buenos o excelentes en el 75% de los enfermos, aún en casos conestenosis mitrales puntiformes. Algunas fueron "silenciosas" es decir, carecían de retumbo diastólico apical. Se obtuvieron malos resultados (una sola muerte) en casos con fibrilación auricular, antecedentes de insuficiencia cardíaca o insuficiencia mitral predominante (un caso).

La selección cuidadosa debe mejorar estos resultados quirúrgicos; en el futuro se debe lograr que los casos buenos o excelentes, sean casi la totalidad.

Total Surgical Correction for the Tetralogy of Fallot



Norman E. Shumway, M.D.

Fifty patients who underwent total surgical correction for the Tetralogy of Fallot are reviewed. A body weight of 10 kilograms was used to determine whether a patient would be submitted to total correction or to a Blalock or Potts shunt. Local cooling with anoxic arrest for up to one hour was a major aid in the identification of intracardiac anatomy. A 50 per cent use of outflow tract gussets may be somewhat high. However, an operative-hospital mortality rate of zero per cent is a noteworthy index of the excellence in diagnosis and surgical care practiced by Dr. Shumway.

In 1955, after 10 years of palliative surgery with the Blalock or Potts operation, Lillehei[1] found that total correction of the tetralogy of Fallot was possible. The early mortality with the corrective operation was high, often in the range of 40%, but today in most medical centers the hospital mortality has been reduced to the neighborhood of 10%.[2, 3, 4]

This paper is a review of all cases of Fallot's anomaly which have been submitted to corrective surgery at the Stanford Medical Center since its opening in 1960. In all, 50 operations have been performed for total surgical correction of this congenital cardiac anomaly, and it will be our purpose to examine this material with a view to pinpointing those details of management which are considered essential for successful results.

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Palo Alto, California
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Clinical Material: Table 1

In consideration of patients with tetralogy of Fallot two clinical categories, cyanotic and acyanotic, are convenient for description purposes. Nine patients in our series were acyanotic tetrads who manifested femoral artery unsaturation with exercise, but the resting mean systemic arterial oxygen saturation was 94%. There were 41 patients with cyanosis. All of these individuals had clubbing of the digits, and the degree of clubbing correlated reasonably well with the degree of femoral artery unsaturation. Previous palliative surgery had been performed in 20 patients. While there were no Potts procedures in the group, two individuals had natural patent ductus arteriosus. There were two other patients with end-to-end left pulmonary artery-subclavian artery shunts. No attempt was made to restore continuity between the right ventricular outflow tract and the distal left pulmonary artery in either case. The subclavian artery was merely

Table 1
Total Correction of Tetralogy of Fallot
In 50 Consecutive Cases

Cyanotic	41
Acyanotic	9
Previous Shunts	20
Patient Under Age 5 Years	12
Outflow Tract Prosthesis	22
Emergency Reoperation	8
Tracheotomy	4
Operative (hospital) Mortality	0

ligated, and no ill effects were noted from this approach.

Rather than age or body surface 10 kilograms is used as the cutoff point determining whether a given patient with symptomatic tetralogy of Fallot is submitted to the corrective operation or to a Blalock-Taussing shunt. In extremely tiny infants obviously the Potts maneuver is necessary, but a Blalock-Taussig anastomosis is preferred. In this series of cases there were 12 patients under five years of age.

Preoperative Evaluation:

Cardiac catheterization was performed in all patients. Results of cardiac catheterization studies are uniform as well as diagnostic in patients with Fallot's tetralogy. The ventricular pressures are equilibrated, and with angiography definite right-to-left shunting from the right ventricle into the aorta is observed.

In addition to catheterization cineangiography is a very useful method for plotting the weird and variable right ventricular anatomy. Concomitant pulmonic valvular stenosis is not consistently revealed by angiocardiography, but within certain limits the special X-ray evaluation is helpful. A certain number of other congenital cardiac anomalies can mimic tetralogy of Fallot, and not the least important of these is transposition of the great vessels with pulmonic obstruction. Perhaps in separating such confusing and complex anomalies where the clinical and even catheterization finding are similar to tetralogy of Fallot cineangiocardiography finds its most useful application.

The Operation:

The most important single factor in conduct of the corrective operative procedure is appropriate identification of the intracardiac anatomy. Elective cardiac arrest carried out by means of local cooling to the heart suspended in its pericardial sac permits accurate and leisurely identification of the ventricular septal defect and the heavy muscle trabeculations which must be removed to provide an adequate right ventricular outflow corridor. With a catheter in the left atrium to aspirate the tremendous accumulation of bronchial flow, the aorta is clamped, and the heart is operated upon under anoxic conditions. Preservation of cardiac viability is assured by local cooling of the heart. Intervals of anoxic arrest to one hour are common with repair of Fallot's tetralogy, but no difficulty has been experienced in retrieving an effective heart beat.

The ventriculotomy is always made with respect for preserving the coronary artery pattern. A very small ventriculotomy can be maneuvered almost any place over the ventricular septum in a cold anoxic heart. The large ventricular septal defect is closed with a Teflon patch and interrupted mattress sutures which are all placed before the prosthesis is lowered into position. Great care must be exercised to avoid piercing the nearby aortic valvular leaflets. Whenever necessary an outflow tract gusset is employed to compensate for a small pulmonic annulus. Infundibular obstruction can be alleviated in almost every case by excision of the trabeculae carneae, but if the pulmonic valvular annulus is diminutive, some kind of outflow tract prosthesis is essential. An outflow tract prosthesis has been used in almost 50% of our cases.

Postoperative Care:

All patients operated upon for total correction of the tetralogy of Fallot are digitalized immediately after the procedure, and digitalis is usually administered for the first three months. We have noticed no difference in the reaction to the corrective procedure of patients with previous shunts. Unquestionably the left side of the heart is larger in patients with functioning systemic-pulmonary artery anastomoses, but no left ventricle has ever failed to support the circulation. Much has been written about the so-called low cardiac output syndrome, but this phenomenon has been absent in all our patients.

It was necessary to perform emergency reoperation in 8 patients due to excessive bleeding. Patients with tetralogy of Fallot appear to bleed considerably more after cardiopulmonary bypass than do patients who are not cyanotic. Nonetheless, in our patients requiring emergency reoperation a bleeding point was found in all but one instance.

Tracheotomy was performed in four patients to facilitate the removal of tracheobronchial secretions and to assist ventilation. Each of these patients was under 10 years of age, but no difficulty was encountered after removal of the tracheotomy tube. The venous and arterial pressures are carefully monitored in the early postoperative period, and their balance is the best indicator of blood volume. All patients are maintained in the Intensive Care Unit for approximately five days after operation.

Results of Surgery:

There were no operative or hospital deaths in the 50 cases. One patient who was asymptomatic died suddenly eight months after operation, but the cause of death was not determined. Evidence of incomplete repair was present in three patients, two of these have been reoperated upon uneventfully. The other patient has a very small shunt and is completely without symptoms. All patients are pink.

Five patients had temporary complete heart block, but in only one patient has any arrhythmia persisted. In this case the heart rate varied between 65 and 85 per minute, and the patient is well and active. Deliberate excision of the pulmonic valve in two patients has not resulted in any clinical incapacity. Both patients have small diastolic murmurs of pulmonic insufficiency, but there is no enlargement of the right ventricle in either case.

Summary:

Fifty corrective procedures for tetralogy of Fallot have been performed since the opening of the Stanford Medical Center in 1960. There were no hospital or operative deaths. Careful preoperative evaluation, elective cardiac arrest by means of local cooling and anoxia, and intensified postoperative care have combined to improve the operative risk for total surgical correction of Fallot's anomaly.

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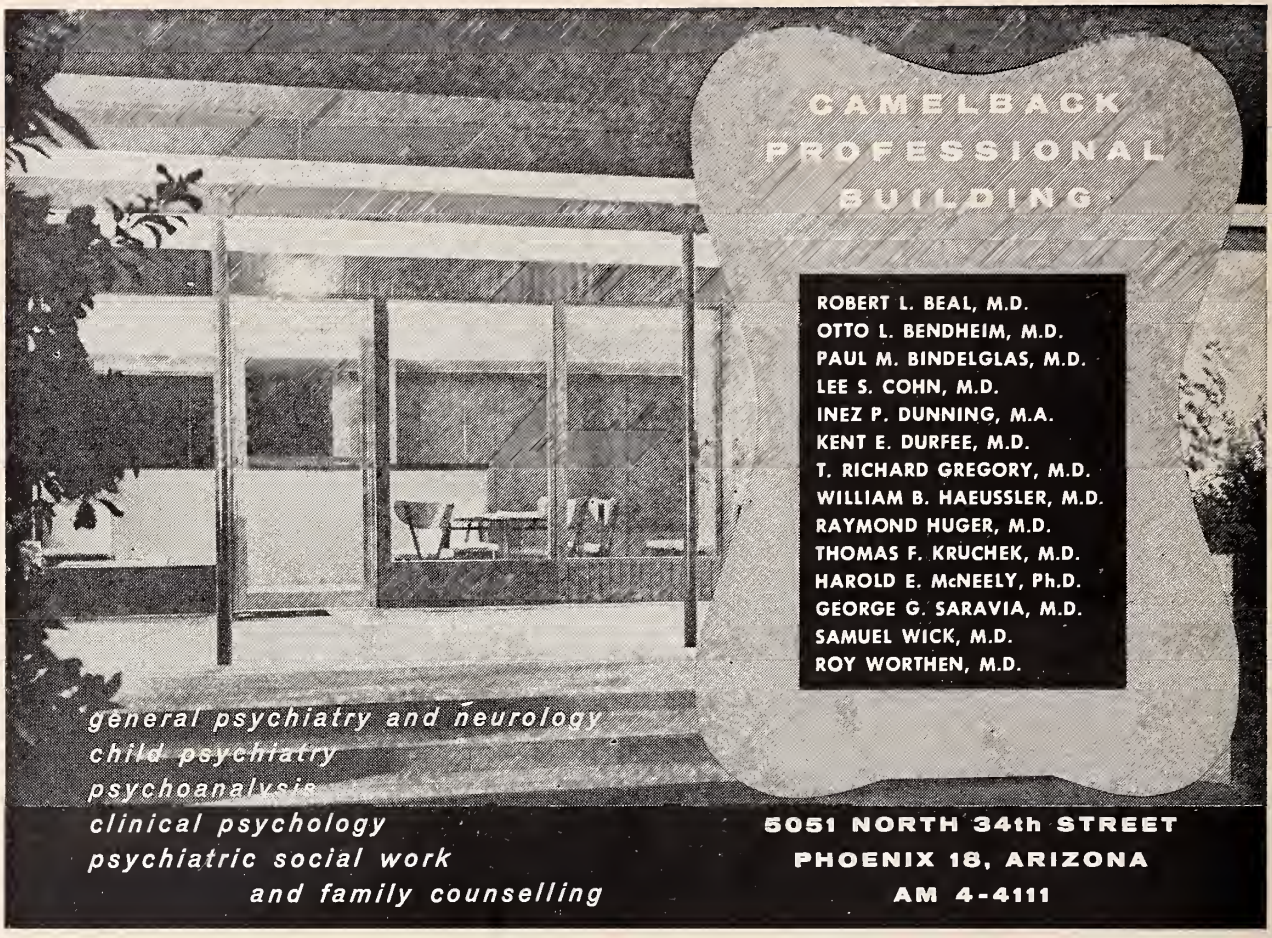
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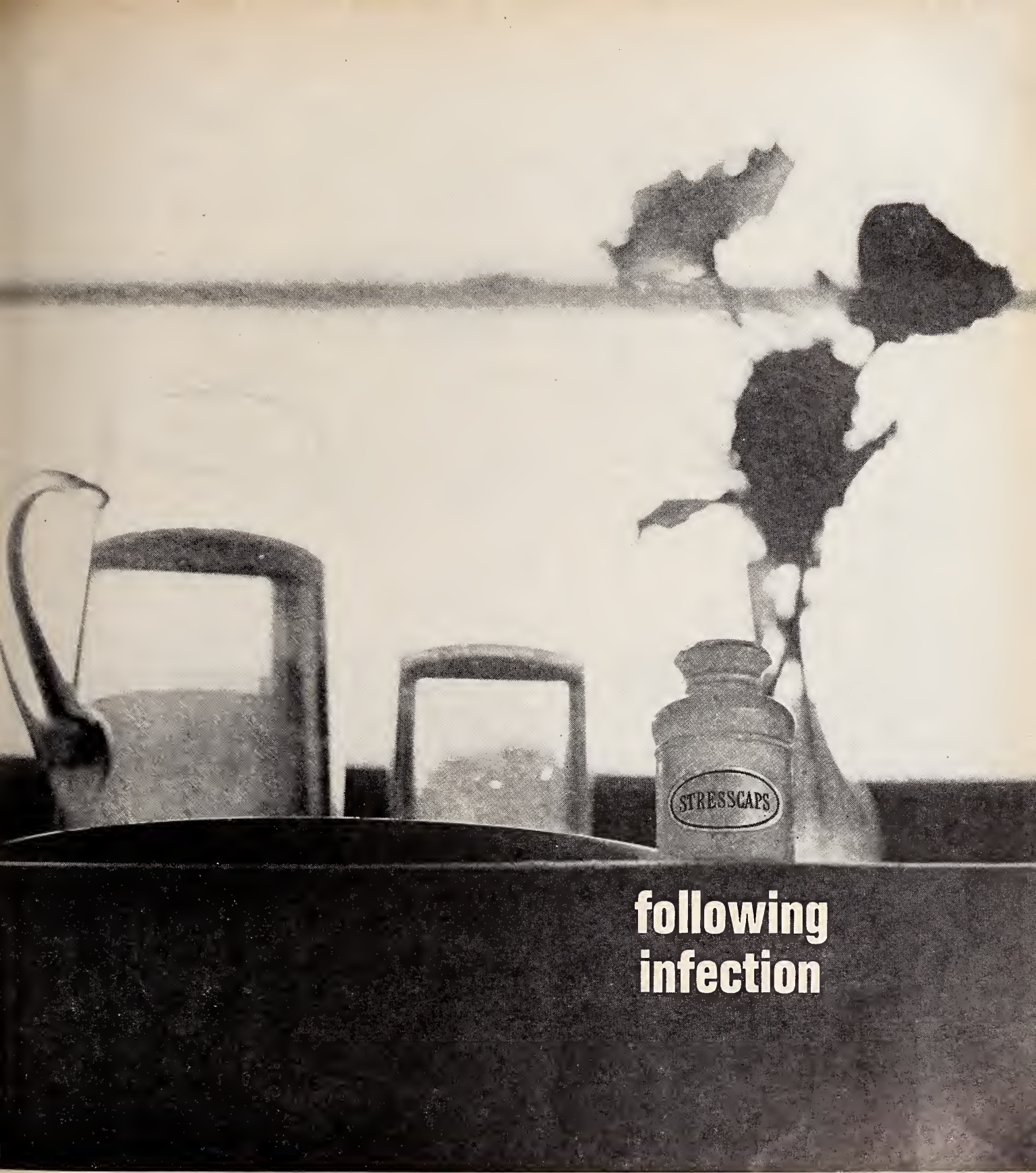


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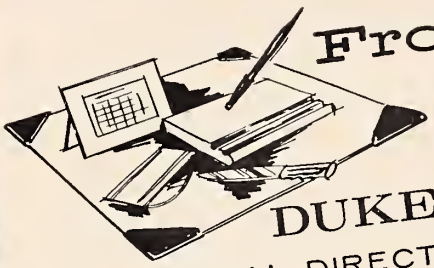
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References: 1. Kramer, P., and Ingelfinger, F.J.: Med. Clin. N. Amer., *32*:1227, 1948. 2. Hock, C.W.: Clin. Med., *8*:1932, 1961. 3. Winfield, I.W.: Am. J. Gastroent., *31*:438, 1959.

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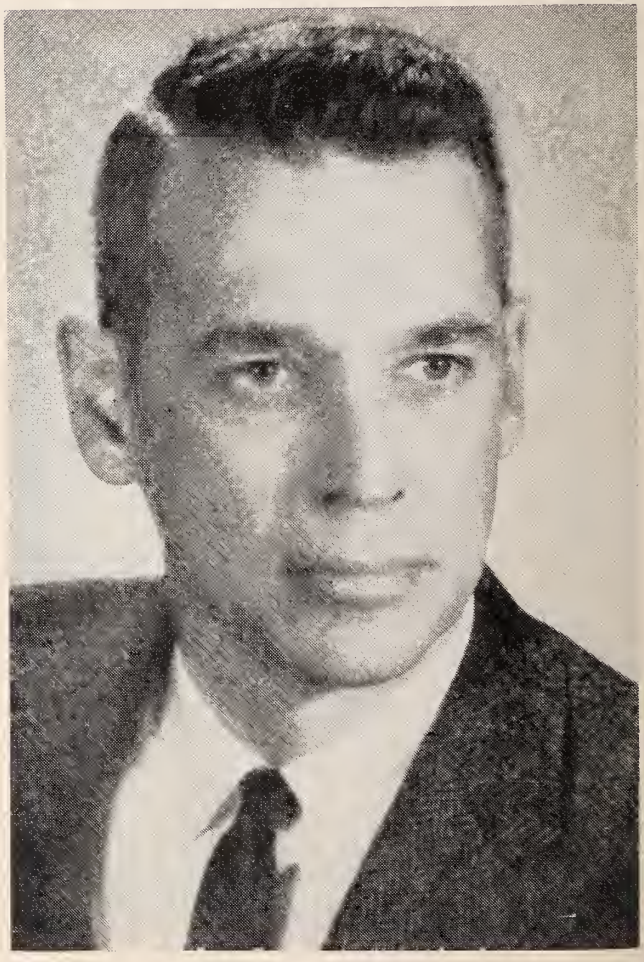
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Philip Krutzsch, Ph.D.



Oscar A. Thorup, Jr., M.D.

Arizona's Planning Team: Personnel

A medical school might conceivably be organized with only a few major departments. On the other hand, there are schools which have slowly fractionated into departments, divisions and services which, in some instances, have numbered as many as forty. Certainly the latter circumstance can only be justified by a particular set of local circumstances, none of which pertain in Arizona. Irrespective of which direction the pendulum swings with regard to this "numbers game" it can be stated that the tone of a good medical school should be set by a single department: namely, Medicine. It is for this reason that we decided, very early, to locate the best qualified person that we could for the position as Head of our Department of Medicine and to persuade him to move to Arizona to join our planning team at the earliest convenient date. Our search has been very successful and, as a result, our appointee will be arriving in Tucson at just about the same time that this issue of *Arizona Medicine* arrives on your desk.

Dr. Oscar A. Thorup, Jr. was born in Washington in 1922. He received his education on the East Coast, including the M.D. degree which was awarded him by the University of Virginia in 1946. After an internship at Queen's Hospital in Honolulu, Dr. Thorup served a year on the neurosurgical service at the University of Virginia and thereafter completed his residency in Internal Medicine at the same institution. Earlier, he had served with the U. S. Army Medical Corps as Assistant Chief of the Medical Service at the Tripler General Hospital in Hawaii. After completion of his training, Dr. Thorup was certified by the American Board of Internal Medicine and served as a research fellow at both the University of North Carolina and, subsequently, the Radcliffe Infirmary at Oxford University. He rose through the academic ranks at the University of Virginia where his recent responsibilities have included those of the Directorship of the Hematology Training Program and the Hematology Clinic for the school. He is married and has three children.

Dr. Thorup served as Assistant to the Dean of the University of Virginia Medical School from 1953 to 1962. During this period he was honored by his selection as a Markle Scholar in Medical Science. He has been a participant in the activities of his county and state medical societies and is a member of many distinguished, national societies. Academically, in addition to his teaching, he has done some very excellent basic reasearch on enzymes with emphasis recently on erythrocytic catalase. He is widely known as the co-author of the textbook entitled "Fundamentals of Clinical Hematology."

The cumulative record of Dr. Thorup's contributions to medical education and research obviously qualify him for the position as Professor and Head of our Department of Medicine. However, as was equally true with the appointment of Dr. Philip Krutzsch to our Planning Team, we have considered such basic qualifications as a starting point rather than as an end point in our search for excellent people since, in addition to his professional credentials, Dr. Thorup brings an attitude to this position which, in our best judgment, is entirely consistent with the requirements of our school at this stage of its development. He has a friendly and warm personality which has helped him become a much admired and respected physician and teacher among his students and professional colleagues in Charlottesville.

Dr. Thorup has already indicated that he believes that the foundation upon which the future strength of our school will rest is going to be greatly influenced by the interest and collaboration which develops between the members of the practicing profession in the state and those at the medical school. He has already stated his personal dedication to making that foundation a strong one.



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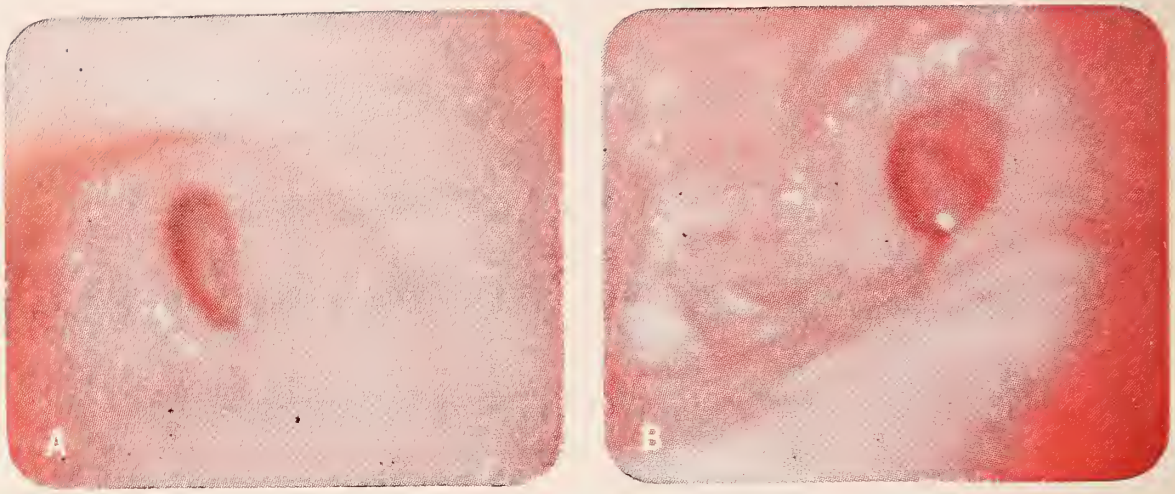
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References: 1. Editorial: J.A.M.A. *189*:691 (Aug. 31) 1964. 2. Foertsch, J. H.: J. Oklahoma Med. Assn. *57*:449 (Oct.) 1964. 3. Paul, H. E., and Paul, M. F.: The Nitrofurans—Chemotherapeutic Properties, in Schnitzer, R. J., and Hawking, F. (Eds.) Experimental Chemotherapy, Vol. 2, New York, Academic Press, 1964.

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Photographs—Harry Barowsky, M.D., Lawrence Greene, M.D., and Robert Bennett, M.D., from a Scientific Exhibit presented at the Annual Meeting of the American College of Gastroenterology, Bar Harbour, Florida, Oct. 24-27, 1965.

SEARLE

Research in the Service of Medicine

Health Screening —

A recent national magazine focused attention on the importance of daily detection of visual defects in children. Although family doctors, pediatricians, and ophthalmologists have been aware of the importance of early ocular examinations, it is only recently that others have recognized this need.

The National Society for the Prevention of Blindness has been a leader in calling attention to the permanent visual loss that occurs when defects go undetected. For five years this organization has helped lay groups in Phoenix and Tucson with visual screening of pre-school children. The newly formed Arizona Society for the Prevention of Blindness will carry on this work. More recently the Department of Public Instruction has formed a committee to study and implement pre-school visual testing.

The efforts of these enthusiastic groups are praiseworthy in their aims, and necessary for certain segments of the population. However, two important points must be re-emphasized. First, a screening or survey is not an examination in depth, and this should be clearly explained to all concerned. Second, although screening tests are important they do not replace the regular examination of private patients in the office of their physician. It is here that amblyopia is first discovered in the four-year-old boy by the family doctor or pediatrician holding up the illiterate chart. It is here that the early diabetic is discovered by the physician doing a "routine" physical examination. It is here that the unexpected chest lesion is uncovered.

The State Fair health screening programs and other dedicated and praiseworthy groups have a place, but they do not replace the thorough examination of the patient by his own physician.

Robert F. Lorenzen, M.D.
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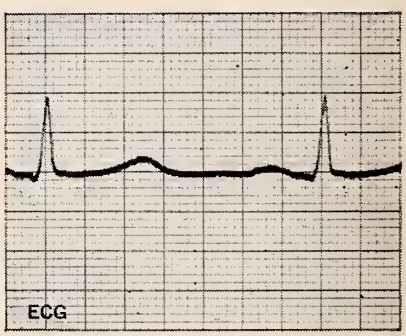
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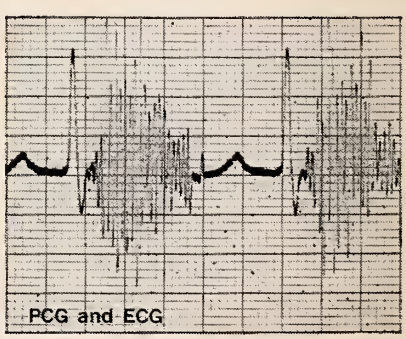
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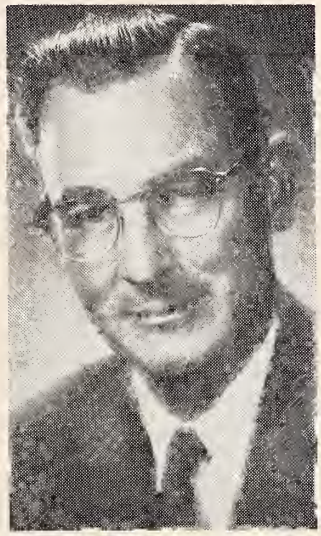
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Adjustment To Marriage —



William B. McGrath, M.D.

THE genital aspect of sex — the meshing of the gears, so to speak — has changed not at all in the memory of man. It is a subject which can be readily taught in a biology class or simply illustrated by folding a drawing of the male over onto a drawing of the female.

Sex, of course, is only one terminus in the searching journey of the mating instinct. In the style and manner of its conveyance the instinct has undergone epochal changes. Savages, struggling so hard for survival, would copulate only as a climax to the engendered frenzy of fertility rites. The rites had religious sanction, at least, and the beckoning fascination of atavism. In more recent and remembered generations there was an elegance to courting, a quaint formality like that which we associate to curtained carriages or to the rich bindings of books before paperbacks became common.

Evolution of the mating instinct is predicted most validly and vividly (and vigorously!) in the dance. In olden times the dance was the young person's introduction to an innocently affectionate but soon to be erotic embrace.

And now? Vertical epilepsy! Jerkings and pumpings like the exposed pistons of an erratic machine! Dancing has become impersonal, puppet-like. The bodily movements borrow both the exhibitionism and onanism of burlesque. It is as if each dancer is performing in front of a mirror ("Look at me!") and is scarcely in need of a partner. Any approach to the pliant tenderness of loving is repulsed. Between the boy and the girl there is an invisible crevice far more impassable than the pillowy barriers of eighteenth century bundling. In their dancing the young people seem to be disputing the worrisome notion that they are sexually emancipated and precocious.

Unfortunately there is nothing in the modern dance to suggest that the boy should lead and the girl should learn to follow.

In this context the expression "to follow" is quite misleading. To follow does not mean to be submissive, to clump along like an empty housetrailer, without garden or grace. Willingness to follow, to adapt, is a kind of *hospitality*. And this should epitomize the feminine role, in mating as in the dance.

Hospitality must be wholeheartedly inviting. Dubious or incomplete welcome is withering and worse than no welcome at all. In sexual as in all other relationships to her husband, the hostess will treat him as an honored guest.

When interest in the guest is at all lacking, the sex act degenerates to such a fiasco as our

horrible slang suggests: as if a man were rudely snatching the chair from under the primping maiden.

A self-conscious hostess is but secondarily mindful of her guest and she will not put him at ease. It is the mirror of narcissism which, like a glass wall, blocks the one partner and bruises the instinct of the other.

Neurotic frigidities of the most contrasting types are gathered in front of the looking glass. Over here is the daddy's girl, coquettish and seemingly overconfident. She is capable of no more than a sham eroticism. It is deceitful. It will prove even more frustrating than the honest inaccesibility of the very timid and insecure.

The immature woman is like a paperback book, of value only when she is picked up and perused. Womanliness ought to have substantive value within its own rich bindings. The adulteress who wails, "But he is the only man who ever made me feel like a woman," should first have become a woman before she married.

Juvenile, too, is any so-called war between the sexes. It does not involve intelligent adults. Working wives, otherwise deplored, can be aware of their own worth without competitive or emasculating attitudes toward male authority and maleness in general.

Secondly, a woman should view her husband as a tangible and unique individual. (A special guest is not part of the cast.) She cannot mate with him if her father's pyjamas do not fit him or if he proves more pedestrian than her cinematic ideal. It is hardly fair for her to reject him for what he isn't.

But it is all right for her to get angry when he provokes her. Conscious anger will ordinarily spend itself, allowing prompt return of sexuality.

If such reactions as annoyance or resentment are habitually repressed, then all other responses will finally decay. Sexual bleakness is practically never just pelvic or partial. And to be told to pretend a passionate response is simply degrading. That kind of advice has the dreary sound of the man next door trying to get his car started in the morning.

Neither should the woman, feeling desolate, take another inventory of her talents in front of the mirror. There is a guest in the house! She should go into the living room to see what is making her husband uncomfortable. A man is not naturally inconsiderate. When he is grouchy it is because something is out of order.

In the first place, a man cannot stand to be kept awkwardly waiting. This is a trumpeting fact to which the best of women seem stupidly indifferent.

Company is coming or a picnic is planned. The flustered wife has not arranged to be on time, though she has had plenty of notice. She always has defensive reasons for the delay. But it is usually too late for the man to occupy himself at an interim chore.

When he reacts with what seems an intemperate rage, spoiling the occasion, she will accuse him of selfishness. And then she will protest: "How can my husband expect me to treat him lovingly after he has been unkind to me?"

No; she has been unkind to her husband! She has given evidence of her willingness to take him into secondary consideration. When this happens repeatedly the husband cannot escape the inference that her blithe indifference is almost deliberately insulting. Such surely would be the case in his work-a-day world, and it would be intolerable.

In the second place and far more malignant is the housewife's astonishing capacity to be untruthful. If a woman promises, "I'll be gone for an hour" or "supper will be ready at six o'clock," a man soon learns not to believe her. Wives think this is funny. It isn't. With flippant rationalization and insincere apology they go on breaking promises until men secretly judge them unreliable and begin to treat them without respect. To be treated disrespectfully, of course, is immediately destructive of a woman's affection.

Lastly, women must realize that a man will react aversively to anything which makes him feel guilty or puts him on the defensive. Toward a stranger he can be supportive and sympathetic.

But when a wife shows her tiredness or distress he will slam the door and go back downtown. She can't win. Implied in her very existence as wife is his feeling of responsibility for any unhappiness she may have.

Instead of feeling sorry for herself and sexually withdrawn she should cultivate the absolute honesty and good natured hospitality which are essential to any genuine passion.

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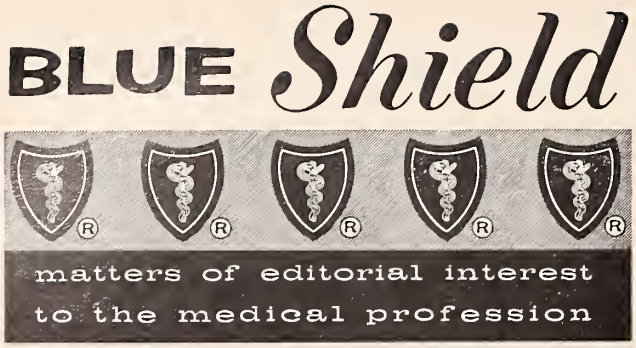
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Blue Cross Intermediary:

Roland W. Wilpitz, president of the board of directors of Arizona Blue Cross, and administrator of Marcus J. Lawrence Hospital, Cottonwood, announced today that Blue Cross will serve as the intermediary to receive and pay bills under the hospital part of the Medicare program in Arizona.

Wilpitz pointed out that the Arizona Hospital Association, as well as the American Hospital Association, had nominated Blue Cross for this role. Nationally, 85 percent of the nation's non-federal, short-term hospitals nominated Blue Cross.

He pointed out additionally that the Arizona Plan is prepared for this new activity, having originated its own Senior Citizen program for people over 65 in June 1959. Arizona Blue Cross has, at the same time, participated in the national Senior Citizen program of the Blue Cross Association since December 1962.

John C. Foster, executive director for the combined Blue Cross/Blue Shield Plan in this state, pointed out that the organization is fully tooled to handle the Medicare job in Arizona, both from the standpoint of personnel and mechanized data processing.

Medicare becomes operative July 1, 1966, for people over age 65.

Blue Shield Comment:

Blue Shield enrollment and benefits soared to new highs in 1965.

According to statistics compiled by the National Association of Blue Shield Plans, coordinator of the 85 Blue Shield Plans in the United States, Canada, Puerto Rico, and Jamaica, membership during the first nine months reached 57,286,041 — up more than a million over the 1964 year end total.

Benefits paid on behalf of subscribers during the first three quarters were $1,017,491,063, $89,658,818 over last year's third quarter and certain to break last year's mark of $1,241,856,467.

Meanwhile, Blue Shield was involved in a wide range of activities resulting from the passage of the Medicare Law.

Following urging by the American Medical Association to "play an important role in administering the Medicare Law," Blue Shield representatives were appointed to serve on work groups established by the Social Security Administration to assist in drafting carrier criteria and regulations for Part B, the Supplemental Medical Insurance Program.

Almost all Blue Shield Plans have signified their interest in serving as carriers and most have resolutions from their local medical societies expressing their preference for Blue Shield.

In addition, virtually all Blue Shield Plans are readying coverage to complement Part B.

In the Federal Employees Health Benefits Program, new figures released by the government during 1965 showed Blue Shield increasing its leadership over its nearest competitor.

In 1960, when U. S. Government employees had a choice of medical-surgical protection, some 937,000 of them selected Blue Shield.

This represented 54.2 percent of those Federal Employees who were given their choice. Blue Shield was then a 2-to-1 favorite over its nearest competitor, which had 465,000 enrolled — 26.9 percent of the Federal Employees in the program.

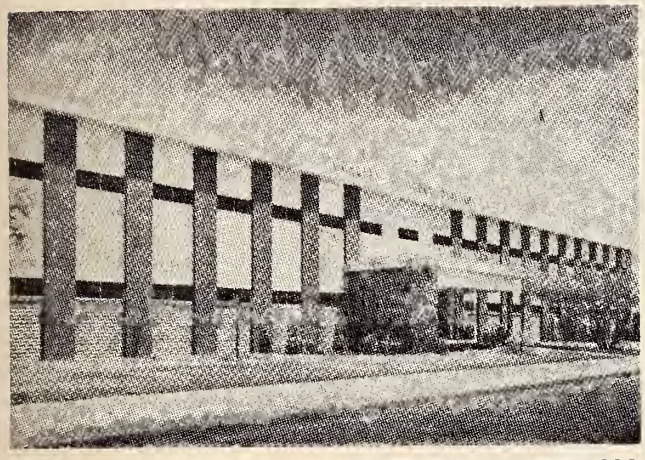
Today, some 1,234,000 U. S. Government employees — 56.2 percent — are Blue Shield subscribers. Meanwhile, its nearest competitor has experienced a drop in the percentage of Federal Employees its covers to 22.6 percent.

Other news of the extent and quality of Blue Shield coverage became available during 1965.

- Some 300 of *Fortune* magazine's top 500 companies provide Blue Shield coverage for their employees;
- Seven of the ten firms selected by *Dun's Review* as the "best managed" businesses in the nation provide Blue Shield coverage for their employees; and
- Ten of the eleven "All America" cities picked by *Look* magazine in 1965 make Blue Shield coverage available to municipal employees.

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DELBERT WILLIAM HESS
1913-1965

Delbert William Hess, M.D. was born in South Range, Wisconsin, in 1913 and died in New Orleans, Louisiana, on September 26, 1965 of carcinoma of the pancreas. He had engaged in the practice of medicine in Tucson since 1941.

Dr. Hess received his medical degree at the College of Medical Evangelists, Los Angeles. He served his internship at Southern Pacific Hospital, Tucson, 1940-1941, and took other post-graduate training at St. Francis Hospital, San Francisco and at Stanford University Hospital.

During World War II he served in the AUS, 1942-1946. In 1951 he was awarded the status of Flight Surgeon at the School of Aviation Medicine, Randolph Field, Texas. He was a member of the American Medical Association, Arizona Medical Association, Pima County Medical Society, Aero-Medical Association.

We extend our sympathy to his family.

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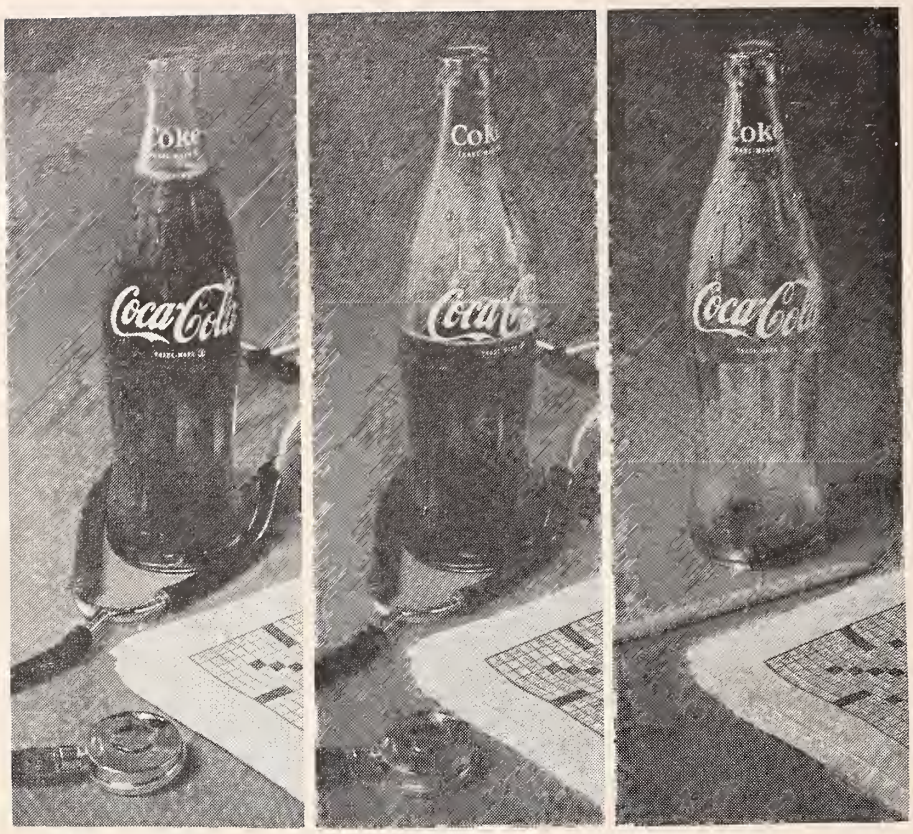
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Excerpts from the Presidential Address at the Assembly of the American Heart Association

By Helen B. Taussig, M.D.

October 19, 1965

Two principles have been strong guidelines in my work, and I shall keep them as such this year. The first is *not to get in a rut*. The second became crystal clear as the field of congenital heart disease developed: it is that *nothing is so good that it cannot be improved.*

Anyone who assumes office anywhere should bear this last statement in mind. It is not a reflection on what has gone before, but the concept *nothing is so good that it cannot be improved* is absolutely essential to progress. Degeneration begins as soon as we become self-satisfied.

The American Heart Association started out, and wisely so, with the emphasis on research. It was a sound investment of public funds. We are proud of the program but we must not become self-satisfied. Let me show you the dilemma that confronts us.

Scientists, and other research workers, live in the future; their thoughts and interests are in the future. As a scientist, I live a large part of my life in the future. We may discover something, but by the time it is described in print, we are engaged in something else far ahead.

The scientific world is an expanding world — an exciting world with always more to do. As research work accelerates, information snowballs; it expands our horizon. The research worker sees an unlimited future in research and feels that his entire energy, and that of the Heart Association should be devoted to it. Nevertheless, as I look at it objectively, I feel about research approximately as I do about cardiac surgery: its impetus is now so great that nothing can stop it. The real danger is that the research worker tends to lose touch with reality. The person who lives in the future and is associated with other research workers more readily hears of the new scientific advances than do others. Indeed, the gap between *pure* research and bringing the fruits of research to the people is far greater than most of us realize. First, a gap of six months occurs between the time a research paper is accepted for publication and the time it is printed. Another extremely difficult gap lies between *pure* research and what is of practical importance at the bedside. The final gap, which urgently needs to be closed, is that occurring after something has been found to be of real value to the patient before it is available to the masses of people.

This is the dilemma: while scientists live in the future, politicians live in the present. As a matter of fact, they are not the only ones — we *all* live in the present.

The promise of a cure of cancer in the future is of no help and of little comfort to the person who has cancer today. The same is true of coronary thrombosis or hypertension. Furthermore, medical practitioners who care for patients live in the present. They are out of sympathy with the research worker because he seems, and is, remote from the present. Many of the research worker's problems seem to have no relation to the equally pressing problems which confront the general practitioner, are of vital importance to him, and require immediate action. These doctors need all the support we can give them.

Thanks to Dr. Carleton B. Champan's splendid testimony before a congressional committee, the American Heart Association has emerged this year as one of the great leaders — indeed, the country's most outstanding voluntary health organization, interested and active in planning for the health of the nation and shaping the future course of medicine. It was mainly through Dr. Chapman's testimony that the regional medical

complexes bill emerged as the regional medical program bill for training, research, and treatment in heart disease, cancer, stroke, and other related diseases. Dr. Chapman has clearly proved that a voluntary agency can influence the government. Indeed, he found that the government was very desirous of help and advice from knowledgeable people.

Some people ask why the Federal Government singles out the medical profession for criticism. The answer is that the health of the nation is of vital importance.

For fifteen years, the American Heart Association has said that *heart disease is the number one killer.* If the government focuses its attention on heart disease, cancer, and stroke, it vindicates the importance of the work of the American Heart Association.

Far from thinking that the voluntary agencies become less important as the Federal Government expands its health program, I firmly believe that they were never more important than today. Six years ago, I was sent in an exchange delegation, on a visit to the U.S.S.R. Before leaving, we were told that we were sent to learn and not to teach. The most important thing I learned was the value of community service because of its absence in the U.S.S.R.

In our country, almost everyone with leisure gives some time and effort to a project of his preference because he feels that it is needed in our society. He may work with a church, welfare, or health organization, or one to prevent delinquency. Whatever we think is weak in our society, particularly if it touches our heart strings, this we try, through a voluntary organization, to correct, or at least to alleviate the situation. Such activities are impossible in the U.S.S.R., or in any dictatorial country, as they would be considered to be a criticism of the government. In a democratic society, criticism is welcomed, and even more so are pilot demonstrations of how to improve the conditions which we criticize.

Happily, in our country, when a knowledgeable group of people appreciates a need which society has to meet, a voluntary agency is formed to determine how best to cope with the situation. Later on, it is able to guide the Federal Government so that certain benefits may be incorporated into law. Such has been the origin of most of our health regulations. The physicians, the investigators, and the sanitary engineers learned how to supply safe water. Individual investigation, then private enterprise, developed our vaccines and antitoxins. When proven to be of benefit, the state health department has made them available. The same was true of visiting nurses in many communities.

The two most important functions of any voluntary agency are: first, to acquire new knowledge, as we are doing through our research program; and second, to determine how best to make that knowledge available to everyone, as we are doing through education and community service. Thus, after developing the best means of combating a problem, we should guide the Federal Government as to how a theory can be converted into action. The *government* has the money; it is our responsibility to guide them. We cannot advise unless we have worked in the field and know whereof we speak.

Dr. Chapman emphasized, as have many others, that one of the main difficulties with the recommendations of the President's commission on heart disease, cancer, and stroke is the shortage of manpower and the necessity for strengthening the clinical training programs. I am happy to report that the American Heart Association, realizing the need to improve medical teaching, has started on a pilot program for "career teachers." That pump, also, will need priming. Already, our career investigators, established investigators, and senior research fellows are supported by the American Heart Association's research program, while the young investigators have become the responsibility of the affiliates and their chapters in their research programs. Similarly, I believe, the logical extension to the program of teaching scholarships would be for the affiliates and chapters, who so desire, to establish traineeships at the postresidency level.* Training men and women to become teachers is certainly one of the most important methods of advancing professional education.

Unfortunately, the important work of the Second National Conference on Cardiovascular Diseases has been eclipsed by the President's Report and the resulting legislation. The Conference not only clarified future needs, but above all

* Note: The Assembly approved a resolution requesting that the Policy Committee amend present American Heart Association policy to permit its affiliates the development of an experimental program of fellowships. Such fellowships will be granted for teaching or special clinical training at the postresidency level and are not to be considered a part of the affiliate's research program or budget; they are to be limited to two per affiliate.

urged affiliates and chapters of the American Heart Association to develop community programs in cooperation with other voluntary health agencies, health departments, medical societies, general practitioners, and medical schools. Moreover, the Conference offered each affiliate $500 as "seed money" to start these programs. A few affiliates have plans well under way; I believe thirty have made plans of some kind. Dr. Barrow has announced that money is available until February 1, 1966, for affiliates who have not yet submitted plans and obtained funds. Applications should be addressed to: Dr. J. Gordon Barrow, Director of Medical Education, Georgia Baptist Hospital, Atlanta 12, Georgia. Dr. Barrow is Chairman of the Follow-up Committee of the Second National Conference on Cardiovascular Diseases.

The regional medical programs are to be composed of one or more medical and research centers and community hospitals, selected from those wishing to join. The bill requires that the program be planned and developed by a local advisory group, including the medical school, hospital administrators, the local medical society, practicing physicians, and voluntary health agencies. This is similar to the composition of the committee which the Second National Conference on Cardiovascular Diseases has requested for the development of a community service program.

The regional medical programs have now become law. The American Heart Association, clearly the most important voluntary health agency concerned with heart disease and stroke, now has a wonderful opportunity to develop sound community programs. We also have an obligation to work with the medical profession in planning the regional medical program. It is a challenge we have never had before and shall probably never have again.

The most critical part of the bill does not lie in strengthening the medical schools and research institutions, but in planning community services so that all persons may receive the best of medical care. This is where the American Heart Association has a chance to play a leading role. Therefore, Dr. Willard A. Krehl, Chairman of the Council Coordinating Committee for Community Program, has appointed a task force to advise the affiliates on sound community service programs and to assist in implementing them. This committee will welcome suggestions from the affiliates. Remember, these programs call primarily for Heart Association *brains*, not Heart Association *dollars*. In addition to planning effective community programs, the American Heart Association and its affiliates should provide leadership in developing better medical care throughout the country.

As you know, the Association has launched a national stroke program and is ready to assist the affiliates in developing local stroke programs. Pilot projects are needed to determine how best to cope with the problems.

Rest assured that I do not underestimate the importance of the general practitioner and his role in medicine. He should not become a cog in a wheel, merely referring patients to centers for treatment. He is the one who decides whether patients need special study and care, or whether they can, and should, be treated at home. He carries the heaviest load. He is expected to know so many things, from the latest developments in the care of coronary thrombosis, to diabetes and pernicious anemia, the early signs of cancer, the management of the patient lying on the ground with a broken hip, and how to care for the unborn baby. A strong community program, including a home-care program, could be of great value to him. Visiting nurses should be available to give nursing care and antibiotics, and to take blood samples and send them to a center. Household helpers should be trained, and some arrangement should be made for the regular relief of the person in charge of the chronically ill patient at home.

I am sure that other types of community service will be thought of. We need the cooperation of all, and particularly the practicing physician, who should play an important role in the program.

Let me return for a moment to the problem of education. Many persons think that one of the most objectionable features of the Report of the President's Commission was the government's proposal to enter the field of public education. Actually, the government is already in education. Virtually no university or medical school in this country could survive without governmental grants. The real problem is to keep education out of politics and in the hands of educators. To do so, we must become more active in public education and guide, rather than be guided by, the government.

Our risk reduction program is really public education, that is, informing the public of what we know today. All that anyone asks is that we share our knowledge with the public and advise them to the best of our ability. We should make a tremendous effort, therefore, to ensure the success of the program. Our antismoking program is also educational. In rheumatic fever prophylaxis, we have both a community and an educational program. We need vigorous implementation of all these activities; we must move forward rapidly and constructively on all fronts.

In our educational programs, we must not forget the adolescent, one of the most neglected members of our society. Although he is usually strong and healthy, it is during adolescence that habits are laid down. This is the time for vigorous antismoking campaigns. Dietary and exercise habits are developed at this age. This is also the time at which the beginning of the diseases of adults can be detected and hopefully dealt with. Many cases of essential hypertension are to be found in the hypertension of puberty. Coronary disease occurs in a younger and younger age group; we must study it in the adolescent and probably in the pediatric group. I have urged the Council on Rheumatic Fever and Congenital Heart Disease to take an active part in the problems of adolescence. The Council will welcome cooperation from all internists who are interested in the problem.

And now I ask each affiliate and chapter to consider how they can best achieve a balanced program of research, education, and community service, and meet the challenges of today. There is much to be done. I count on each and all of you to make this year a success.

MODERN CONCEPTS OF CARDIOVASCULAR DISEASE
January 1966

THE EXPANSION IS UNDER WAY
Federal Employees To Get Chance To Join Medicare

The 2.5 million federal employees would be given a "one-shot" opportunity to be covered by Medicare under a proposal to be considered today by the President's cabinet committee on retirement and fringe benefits.

This will be the first formal meeting of the top-level committee headed by Director Charles L. Schultze of the Budget Bureau. The committee was to have made its final report to Johnson by Dec. 1 but more pressing problems delayed it. Numerous meetings have been held by committee alternates.

A proposal by the alternates would give present employees the option to be covered by the basic Medicare program to start July 1, or to remain out of it. But coverage would be compulsory for new employees hired after that date.

Federal employees and their dependents would have to be 65 or older to benefit from the basic Medicare program which includes hospitalization and related benefits. The cost to them would be .35 of 1 per cent on the first $6,000 of salary, and it would rise gradually to .8 of 1 per cent.

It is assumed that the President will ask Congress to amend the new Medicare act to extend its hospitalization coverage to federal employees who are now exempt from it. Former and present federal employees age 65 or older are free to buy Medicare's medical supplemental benefits at a cost of $3 a month.

Along that line, the National Association of Retired Civil Employees, which represents CS retirees, will ask Congress to pay the $3 monthly cost of the supplemental plan for eligible retirees.

Officials estimate anywhere from 25 to 50 per cent of present federal employees would shun basic coverage. These employees either have Social Security coverage now from former or part-time jobs, or they plan to take private jobs later, after retiring from CS, that would give them Social Security benefits and Medicare coverage.

This is why the alternates agreed present employees should be given the option to either take or leave basic Medicare coverage. They emphasize, however, that the employees should be limited to one, and only one, opportunity to make the election. Otherwise, it would be unfair to employees who first elect coverage.

A companion proposal calls for a linkage of Medicare with the federal employee health benefits program. The Civil Service Commission would work this out. Since employees couldn't get benefits from both Medicare and their own health program for the same period of hospitalization, it would be pointless for them to pay the cost of dual coverage.

ARIZONA REPUBLIC
December 30, 1965

September 11, 1965

Dear Herb:

I appreciated receiving a copy of your letter to Don, in which you cite the seeming dilemma facing those who contemplate non-participation as an appropriate and effective position for physicians unwilling to expediently assist the propagation of a federal medical care system in America.

It is natural for all of us to be somewhat bewildered by the onslaught of governmental intrusion into our lives, this year more than any other. The surfeit of current legislation touching medicine does command our attention and serious thought. Yet our concern as citizens must be fully as great as it is for us as physicians.

Each of us must determine his own peak of tolerance, his own limit of participation, in programs toward which he has held consistent and principled opposition. For my part, I cannot agree with the implication woven throughout recent utterings by the AMA President and heirarchy, or by certain AAGP leaders as reported in the current GP, that the mere circumstance of Medicare's enactment means we ought all cooperate fully in its implementation and ensure its success. Surely the fact that a majority of legislators have finally enacted a given law does not certify that law as either warranted or wise. Nor does it mean that henceforth all opposition, objection to, or criticism of, such a law should cease. History records the enactment of as many bad as good laws, and the struggle to undo the bad has often been formidable indeed.

But unless some free men in every age stand against the tyranny lurking in every growing government as it inevitably usurps the responsibilities and decisions of individual citizens, the bad will always prevail.

These men to whom I refer say they will protect our future interests by helping to establish regulations for optimal control and operation of this law. But how is this sort of capitulation to protect us? Was not our former opposition to the law's basic principle, to its entire set of premises, and if so can we reasonably set aside our own principle for mere adjustment of its separate stipulations? Will insuring that our government-paid fees are generous and our pocketbooks full, will negotiating just the minimal number of rules, compensate for our sale of spirit, our fragmentation of freedom? Will our profession a dozen or a hundred years hence have profited? Will our patients right now or later have benefited? Those are the questions we ought to ask – not whether Public Law 89-97 is to fulfill its advocates' political desires or its beneficiaries' futile groping for security.

Recognizing the place for reciprocal understanding and reasonable compromise in the affairs of men, I am nonetheless not one of those who blindly worship "the majority" and "democracy" as things beyond reproach. I should insist that when men or groups of men perform less than wisely, or make mistakes, or substitute transient gain for lasting value, as many of us as can be summoned to the task ought to courageously pursue every means to rectify what was done. If our leaders are suggesting that this is a revolutionary view, then our need for revolutions is surpassing great.

It has become almost commonplace to ridicule or joke away principle with the indifferent shrug and perhaps an epithet like "Big Deal!" But isn't it almost time we stopped to consider whether the issues we face are not really and truly a very big deal for all of us?

Granted that government is cleverly doing all it can with Medicare to circumvent physician complaint, to carry their ball right around our wide-open end, to prevent any real confrontation with "non-participation." That is why the question you ask, Herb, about our wisest position regarding this new law, can only be answered by yourself, for yourself.

John Hancock and the Signers were essential to the survival of liberty in their day. The tide of events in this nation calls anew for men of that valor, the fiber of freedom their strength, the love of justice their inspiration. Would that the numbers of such men were legion! But if they are not, the task to each of them is so much the greater.

Sincerely yours,

/s/ J. A. Cosgriff, Jr., M.D.,
Olivia, Minnesota

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"Why Not Have a Mobile Unit For Door-to-Door Solicitation?"

Medicare Enrollment Made Eeasy

Special centers where eligible persons can sign for federal Medicare are expected to be in operation by the middle of next month, the Social Security Administration here reported.

William R. Howells, Assistant SSA district manager, said eight or ten centers will be situated at strategic points around the Phoenix metropolitan area.

Howells said a recent program to have people sign up at the district office after business hours attracted less than 100 applicants.

The Medicare Program for senior citizens 65 or older will go into effect July 1. Howells said any person 65 or older may sign up whether or not he has ever been covered by Social Security.

Howells said that while no local figures are available, it is believed that 55 per cent of all eligible persons in Arizona have already registered.

The SSA office at 1302 N. Central will be open until 7:30 p.m. Tuesday and Wednesday to accept after-hours registrations, Howells said. He added that after Jan. 1, for an indefinite period, those same closing hours will be maintained on Tuesdays and Wednesdays, and that the office also will be open from 8:30 a.m. to 12:30 p.m. on Saturdays.

THE ARIZONA REPUBLIC
December 26, 1965

One of our colleagues forwarded us the following news item thinking we might find it interesting to learn what it requires to become a "doctor."

Chiropractic School Will Graduate 12

Twelve Phoenix chiropractic doctors will graduate from the Los Angeles Chiropractic College Graduate School during ceremonies at 8:00 p.m. Saturday at the Phoenix Ramada Inn.

The doctors attended classes one weekend a month at the Ramada for the past two years. The course, comprising 240 hours of classroom instruction, was taught by Dr. F. Maynard Lipe, dean of the Los Angeles school and president of the American Society of Chiropractic Orthopedists.

PHOENIX GAZETTE
November 24, 1965

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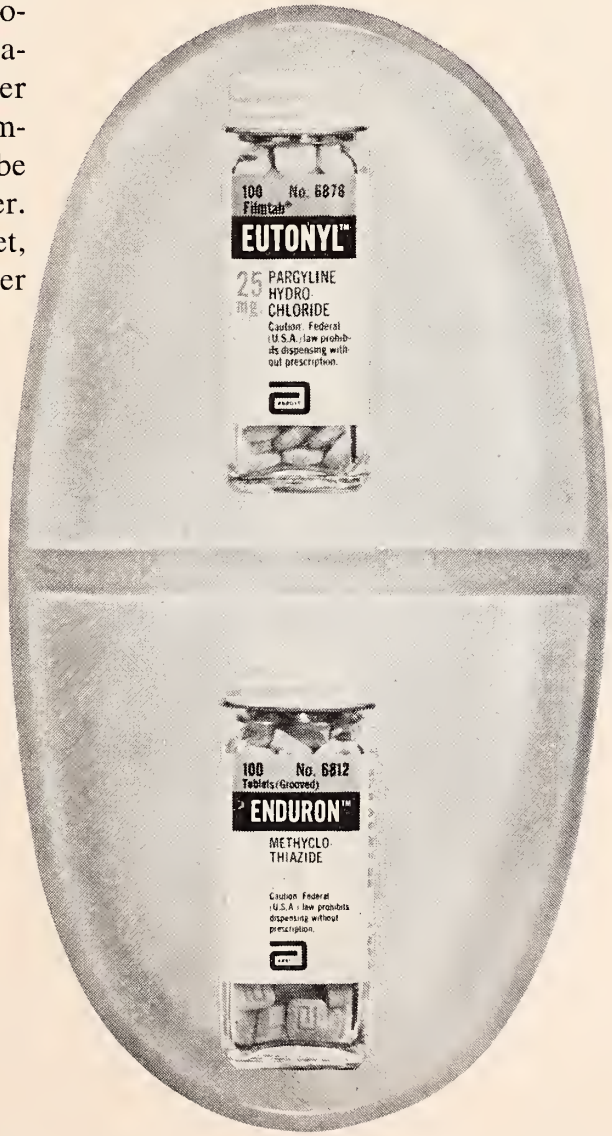
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Announcing
EUTRON™
pargyline hydrochloride 25 mg. and methyclothiazide 5 mg.

for control of moderate to severe hypertension

Unique combination produces greater antihypertensive effect with lower doses

Eutron is the combination in a single tablet of 25 mg. Eutonyl (pargyline hydrochloride) and 5 mg. Enduron (methyclothiazide). This combination produces greater therapeutic effect than that of either component used alone. Side effects may be milder, too, as dosages are generally lower. The effective dosage is usually one tablet, once daily. Tablets are scored for greater dosage flexibility.



Each Eutron tablet contains two proven antihypertensives in the ratio shown to be most effective in most patients.

TM—TRADEMARK

New **EUTRON** extends your range of treatment in moderate to severe hypertension



A single product you can use even in the presence of congestive heart failure or edema

Eight out of 10 patients respond

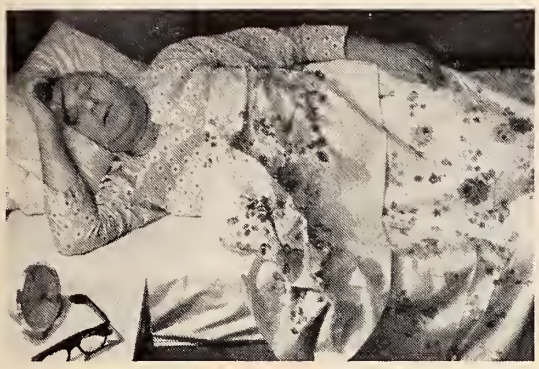
In clinical trials, Eutron produced normotension or a significant reduction in blood pressure in eight out of 10 patients studied. The rationale for the product is this: Eutonyl used alone is a potent antihypertensive. Its antihypertensive action is markedly enhanced by Enduron, a potassium-sparing thiazide.[1,2,3] The combination (Eutron) thus produces greater antihypertensive effect with lower dosages of the Eutonyl component, and milder side effects may be seen.

512214

1. Torosdag, S., Schvartz, N., Fletcher, L., Fertig, H., Schwartz, M. S., Quan, R. F. B., and Bryant, J. M., Pargyline Hydrochloride as an Antihypertensive Agent With and Without A Thiazide, Am. J. Cardiol., 12:822, Dec., 1963.

2. Pollack, P. J., Pargyline Hydrochloride and Methyclothiazide Combined In The Treatment of Hypertension, Cur. Thera. Res., 7:10, Jan., 1965.

3. Bryant, J. M. et al., Antihypertensive Properties of Pargyline Hydrochloride, New Non-Hydrazine Monoamine Oxidase Inhibitor Compared with Sulphonamide Diuretics, J.A.M.A., 178; 406, Oct., 1961.



BP reductions in the recumbent and sitting positions often are nearly as great as in the standing. In clinical trials, the average *recumbent* BP reduction was 36/18 mm. Hg.



The average *standing* reduction in clinical trials was 45/22 mm. Hg. Thus the difference between the standing and recumbent readings was only 9/4 mm. Hg.



Significantly lowers blood pressure in all body positions; less likelihood of orthostatic hypotension

In clinical trials, the average reduction in standing blood pressure was 45/22 mm. Hg.; in the sitting position it was 48/20 mm. Hg.; and in the recumbent position, 36/18 mm. Hg.

Because Eutron effectively reduces blood pressure in all body positions, there is reduced likelihood of orthostatic symptoms or hypotension.

This was reflected in the relatively mild character of side effects seen in clinical trials (see below).

Smooth and gradual onset

Onset of antihypertensive action is usually quite smooth. Initial reduction of systolic and diastolic readings is usually seen within a week – maximum reduction in seven to ten days.

Less troublesome side effects may be seen; frequent improvement in "sense of well-being"

Fewer than 1% of patients studied discontinued Eutron therapy because of side effects. This is due in part to the relatively low dosage needed with the combination. Usual recommended dose is one tablet daily—that is, 25 mg. Eutonyl with 5 mg. Enduron. *This is about half the usual therapeutic dose of Eutonyl given alone.* As a consequence side effects may be milder. And, as with Eutonyl given alone, the patient may well note an increased sense of well being. This is in distinct contrast to most other antihypertensive therapy.

ABBOTT

Prescribing information for EUTRON

INDICATIONS: Eutron (pargyline hydrochloride and methyclothiazide) is indicated in the treatment of patients with moderate to severe hypertension, especially those with severe diastolic hypertension. It is not recommended for use in patients with mild or labile hypertension amenable to therapy with sedatives and/or thiazide diuretics alone.

CONTRAINDICATIONS: Eutron is contraindicated in patients with pheochromocytoma, advanced renal disease, paranoid schizophrenia and hyperthyroidism. Until further experience is gained it cannot be recommended for use in patients with malignant hypertension, children (under 12 years of age), or pregnant patients.

The concomitant use of the following is contraindicated: other monoamine oxidase inhibitors; parenteral forms of reserpine or guanethidine; sympathomimetic drugs; foods high in tyramine such as cheese; imipramine and amitriptyline, or similar antidepressants; methyldopa. A drug-free interval of two weeks should separate therapy and use of these agents.

WARNINGS: Pargyline hydrochloride is a monoamine oxidase inhibitor. Patients should be warned against eating cheese, and using alcohol, proprietary drugs or other medication without the knowledge of the physician. When it is necessary to administer alcohol, narcotics (notably meperidine), antihistamines, anesthetics, barbiturates and other hypnotics, sedatives, tranquilizers, or caffeine, these agents can be used cautiously at a dosage of ¼ to ⅕ the usual amount. Avoid parenteral administration where possible. Withdraw pargyline two weeks before elective surgery.

Patients should be warned about the possibility of postural orthostatic hypotension. Those with angina or other evidence of coronary disease should not increase physical activity. Pargyline may lower blood sugar. Potassium depletion is unlikely at the recommended dosage, but if it occurs, adjust dosage or withdraw or provide added natural food sources of potassium; potassium tablets should be avoided wherever possible, as bleeding or obstructive ulceration of the small bowel has been associated with their use; potassium levels should be especially watched if the patient is on digitalis or steroids, or if hepatic coma is impending.

PRECAUTIONS: When determining the antihypertensive effect of Eutron, blood pressure should be measured while the patient is *standing*. Use with caution in hyperactive or hyperexcitable persons. Such persons may show increased restlessness and agitation. Withdraw drug during acute febrile illness. Watch patients with impaired renal function for increasing drug effects or elevation of BUN and other evidence of progressive renal failure; withdraw drug if such alterations persist and progress. Pargyline has not been shown to cause damage to body organs or systems. As with all new drugs, complete blood counts, urinalyses, and liver function tests should be performed periodically. The drug should be used with caution in patients with liver dysfunction. With prolonged therapy, examine patients for change in color perception, visual fields, and fundi.

Elevated blood urea nitrogen, serum uric acid or blood sugar are possibilities attributable to the methyclothiazide in Eutron. Methyclothiazide may also reduce arterial response to pressor amines. Blood dyscrasias, including thrombocytopemia with purpura, agranulocytosis and aplastic anemia, have been seen with thiazide drugs.

SIDE EFFECTS: The use of pargyline may be associated with orthostatic hypotension. Mild constipation, slight edema, dry mouth, sweating, increased appetite, arthralgia, nausea and vomiting, headache, insomnia, difficulty in micturition, nightmares, impotence, delayed ejaculation, rash, and purpura have been encountered with pargyline. Hyperexcitability, increased neuromuscular activity (muscle twitching) and other extra-pyramidal symptoms have been reported. Drug fever is extremely rare. Congestive heart failure has been reported in a few patients with reduced cardiac reserve. Nocturia has been observed with the combination. If side effects persist, despite symptomatic therapy or reduction of the dose, discontinue the drug.

ABBOTT

512214

GUILT THROUGH IGNORANCE

Chapter 13, Article III — Section 32-1451 A. Arizona Revised Statutes 1964. Are you familiar with this imposing reference title?

If you are not, you should be, lest you be "guilty through ignorance."

This vital part of the Medicine and Surgery Act of Arizona is of tremendous importance to every licensed doctor of medicine in Arizona. Here is the section in full:

ARTICLE III
REGULATION

32-1451. Grounds for censure, probation, suspension or revocation of license; duty to report; unprofessional conduct hearing; decision of board

A. Any doctor of medicine, or the Arizona Medical Association, Inc., or any component county society thereof, shall and any other person may, report to the board under oath any information such doctor, association, society or person may have which appears to show that a doctor of medicine is or may be guilty of unprofessional conduct or is or may be mentally or physically unable safely to engage in the practice of medicine.

KEY WORDS

There are several "key" words in this section of the law that seem to have caused misunderstanding among the doctors of Arizona.

"SHALL." The statute clearly states that "any doctors of medicine . . . **shall** . . . report to the Board under oath any information such doctor . . . may have. . . ."

The word "shall" is specific and leaves no choice of action to the doctor.

"UNDER OATH." They key words are vital. A statement "under oath" protects both the doctor doing the reporting and the doctor being reported by reducing the chance of unfounded rumors being reported for malicious reasons.

"APPEARS." The significance of this word is great. It means that the information reported does not necessarily have to have been extensively investigated, substantiated and independently verified before it is reported to the Board.

These are but a few of the "key" words which need understanding.

Obviously, this section was inserted in the law to make it possible for the Board of Medical Examiners to fulfill its statutory obligation to all the people of Arizona.

It is the obligation of each doctor of medicine to be familiar with this law and, of course, to adhere to it.

When you have a question about the applicability of the law, don't hesitate to contact the Board office, the personnel of which are most willing to assist in any way they can. The offices of the Board of Medical Examiners are located at 4601 N. Scottsdale Road, Suite 201, Scottsdale. The mailing address is Box 128, Scottsdale, Arizona 85252. The phone number is 946-3420. The office is open Monday through Friday, 8:30 a.m. to 5:00 p.m.

Contact them if you are in doubt about any aspect of this statute. They are there to help.

BOARD OF MEDICAL EXAMINERS

AMA OFFICIAL VISITS ARIZONA

The Arizona Medical Association was privileged to have F. J. L. Blasingame, M.D., as a guest at the Board of Directors meeting on December 12th. Dr. Blasingame, Executive Vice President of the American Medical Association, presented in detail the activities of the parent organization and administration thereof under his responsibility and direction.



F. J. L. Blasingame, M.D.



Dr. Blasingame and James E. O'Hare, M.D., ArMA President.



Charles E. Henderson, M.D., Secretary, and Dr. Blasingame



Arnold H. Dysterheft, M.D., Vice President, and Dr. Blasingame.



1966 OFFICERS OF MARICOPA COUNTY MEDICAL SOCIETY

Left to right, Charles Finney, M.D., Secretary; John Ash, M.D., President-Elect; Ray Fife, M.D., President; Monroe Green, Treasurer, and John Westfall, Vice President.

FUNGUS RESEARCH

Fungus research at the University of Arizona titled "The Epidemiology of Cryptococcosis in the Southwest" has received a one-year grant of $17,954 from the U. S. Public Health Service.

The research conducted by Dr. Adelaide E. Evenson, UA associate professor of microbiology, is concerned with the incidence and distribution of an infection due to yeast that occurs in humans and animals.

Dr. Evenson said work in the project includes "field collection of yeast strains existing in nature in the Southwest and extensive laboratory studies of their disease producing power." UA graduate students Dorothy B. Prest and Ann M. Nuuttila are assisting.

ARIZONA ACADEMY OF GENERAL PRACTICE

The following are the current officers of the Academy:

President — Matthew, Cohen, M.D., Phoenix.

President-Elect — Richard O. Flynn, M.D., Tempe.

Vice President — Hugh E. Dierker, M.D., Flagstaff.

Secretary — Clifton J. Alexander, M.D., Tucson.

Treasurer — Walter V. Edwards, M.D., Phoenix.

The American Academy of General Practice, of which the Arizona Academy is a chapter, is a professional association of family physicians dedicated to continuing education. In the future as in the past, they seek to provide the highest quality of comprehensive medical care for America's families, including the young and the aged.

THE CLOSED-CHEST METHOD OF CARDIOPULMONARY RESUSCITATION – REVISED STATEMENT

In an Editorial in *Circulation* (Vol. XXVI, No. 3, September 1962), a statement was published to serve as a guide to the public regarding the status of the closed-chest method of cardiopulmonary resuscitation. As experience has accumulated, both the benefits and hazards of this method have become increasingly apparent. The previous statement indicated that the closed-chest method of cardiopulmonary resuscitation was a medical procedure. In the opinion of the undersigned, sufficient experience has accumulated to reclassify closed-chest cardiopulmonary resuscitation as an emergency procedure. A revised statement has therefore been prepared on the present status of this technique.

"Sudden death" may result from a variety of conditions or circumstances, such as water submersion, electrical shock, asphyxiation, heart attack, or during anesthesia or surgery. When sudden and unexpected cessation of respirations and functional circulation occurs, closed-chest cardiopulmonary resuscitation has proved to be of considerable value. A survival rate of 25 per cent has been reported in a collected series of 1,270 patients.

Among the essential prerequisites for successful closed-chest cardiopulmonary resuscitation are prompt recognition and adequately trained personnel. Resuscitation is most likely to be successful in the operating room, recovery room, or cardiac catheterization laboratory, where patients are under constant observation and the recognition of cardiac arrest is made without delay. The increased utilization of electronic monitoring techniques in these areas as well as in intensive care units will shorten the crucial interval between the occurrence of cardiac arrest and the application of approved methods of closed-chest cardiopulmonary resuscitation. So far, a lesser measure of success has been experienced where a coronary heart attack is the etiologic factor, but the increasing number of successful resuscitation attempts holds promise in the future for the saving of a significant number of lives. The prompt application of closed-chest cardiopulmonary resuscitation in coronary heart attacks as in other causes of cardiac arrest has enabled lives to be saved which previously would have been lost. Closed-chest cardiopulmonary resuscitation is, therefore, increasingly used as an emergency measure to be applied promptly after the occurrence of cardiac arrest by well-trained physicians, nurses, and members of the allied health professions and rescue squads. Subsequently, definitive therapy, including the use of drugs or an electric defibrillator, or both, is required in most cases to restore the circulation permanently.

Before closed-chest cardiopulmonary resuscitation is initiated, the resuscitator should observe the victim for absence of respiration, absence of pulse, and dilation of the pupils. Artificial respiration at least is needed if respirations are absent. If rapid observation indicates the absence of circulation, the circulation must be supported by closed-chest cardiopulmonary re-

suscitation. The resuscitator must be thoroughly trained in both artificial ventilation and artificial circulation.

Reported injuries due to closed-chest cardiopulmonary resuscitation have included damage to the heart and liver, internal bleeding, multiple rib fractures, fat emboli, and puncture of the lungs. Such injuries are much more likely to occur when closed-chest cardiopulmonary resuscitation is applied by untrained individuals. Injuries can be kept to an acceptable minimum if the resuscitator is trained to open the airway adequately, apply expired air ventilation, locate the correct pressure point for closed chest manual heart compression (lower half of the sternum), and position himself to the side of the victim who should be on a solid surface. Pressure should be applied through the heel of the hand and the sternum pushed in toward the spine about 4 or 5 cm in adults. The proper positioning of the hands over the correct pressure point reduces the likelihood of injuries. Successful resuscitation can be performed by one person giving both artificial ventilation and circulation, although two qualified persons are preferable. The risk of such complications is acceptably small and the anticipated benefits are great enough to warrant the prompt application of closed-chest cardiopulmonary resuscitation by well-trained individuals in instances of suspected cardiac arrest. Since it is estimated that irreversible changes to the central nervous system occur 4 to 6 minutes after cardiac arrest, resuscitation efforts must be begun promptly after the recognition of cardiac arrest.

The use of pressure-cycled automatic breathing devices in conjunction with external cardiac compression has been ineffective. The use of volume and time-cycled mechanical breathing devices and automatic chest compressors is being studied. Mouth-to-mouth breathing or bag and mask units are of proved value. The latter permits the early use of oxygen.

The successful application of closed-chest cardiopulmonary resuscitation depends upon thorough and careful training. Films, lectures, and demonstrations are not by themselves sufficent. They should be supplemented by practice of both artificial ventilation and artificial circulation on manikins. Refresher courses are necessary in any well-organized program. Closed-chest cardiopulmonary resuscitation should only be employed by individuals who have been properly instructed. Those individuals should be trained who by the nature of their professions and occupations are most likely to be in attendance or to be summoned when cardiac arrest occurs. Further experience must be accumulated before training in this procedure may be extended to certain segments of the general public.

Nurses in intensive care units, recovery rooms, and at the bedside are of particular importance in such a program, since they are so often the first persons to recognize the occurrence of cardiac arrest. Valuable minutes are lost if the person at the bedside must delay closed-chest cardiopulmonary resuscitation because of lack of training.

Any consideration of closed-chest cardiopulmonary resuscitation must be in the concept that it is one step in a total emergency care program, and continuity is essential from emergency procedures through transportation to in-hospital care.

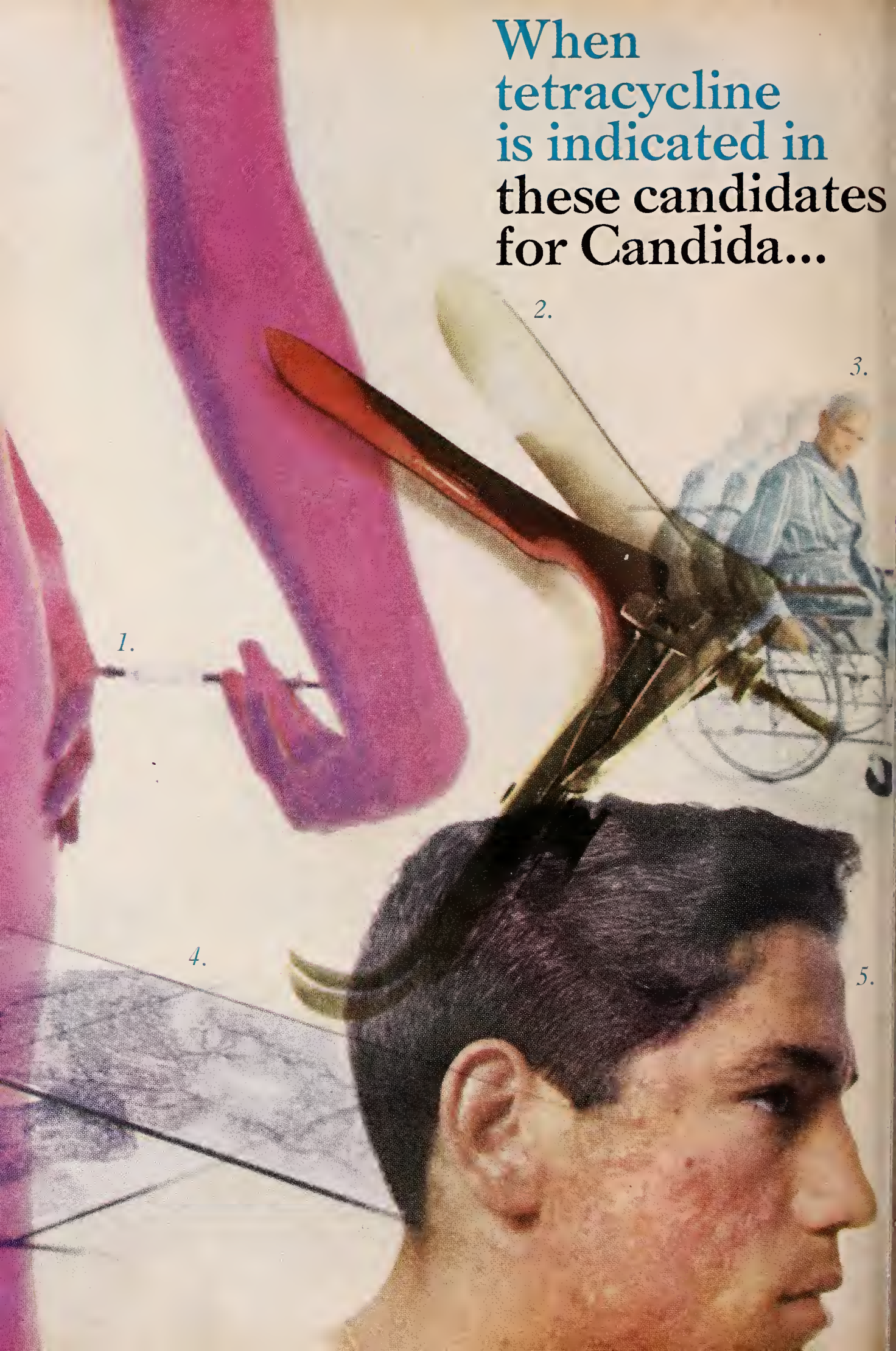
The implementation of a program in cardiopulmonary resuscitation depends on the availability of a comprehensive program of closed-chest cardiopulmonary resuscitation in each hospital. Community hospitals are urged to establish resuscitation committees composed of an anesthesiologist, a surgeon, an internist, a nurse, and an administrative recorder. This group would have the responsibility for organizing the training program, setting up standards and policies for cardiopulmonary resuscitation, obtaining resuscitation equipment and seeing that it is at hand when needed, evaluating the results of attempted resuscitation, and devising ways to improve the techniques.

The following statement has therefore been approved by the undersigned organizations:

"External cardiac resuscitation is a proved and accepted life-saving technique and should be applied as an emergency procedure by properly trained individuals of the medical, dental, nursing and allied health professions and of rescue squads; and the undersigned urge that training procedures for respiratory and closed-chest cardiac resuscitation be widely disseminated to these groups."

American Heart Association, Inc.
American National Red Cross
Industrial Medical Association
United States Public Health Service

When tetracycline is indicated in these candidates for Candida...



New low-cost tetracycline/ antifungal therapy

Tetrex®-F

tetracycline phosphate complex –nystatin

Because new Tetrex-F (tetracycline phosphate complex-nystatin) is the most economical therapy of its kind that you can prescribe, it is a sound choice whenever tetracycline therapy is indicated in patients predisposed to monilial infections.

Who are these "candidates for Candida"?

1. diabetic patients
2. nonpregnant women with a history of recent or recurrent monilial vaginitis
3. elderly or debilitated patients
4. patients with a past history of moniliasis
5. patients on long-term tetracycline or corticosteroid therapy.

For these patients, Tetrex-F (tetracycline phosphate complex-nystatin) provides efficient tetracycline therapy against a broad range of infections *plus* protection against superinfection associated with the overgrowth of *C. albicans* in the G.I. tract.

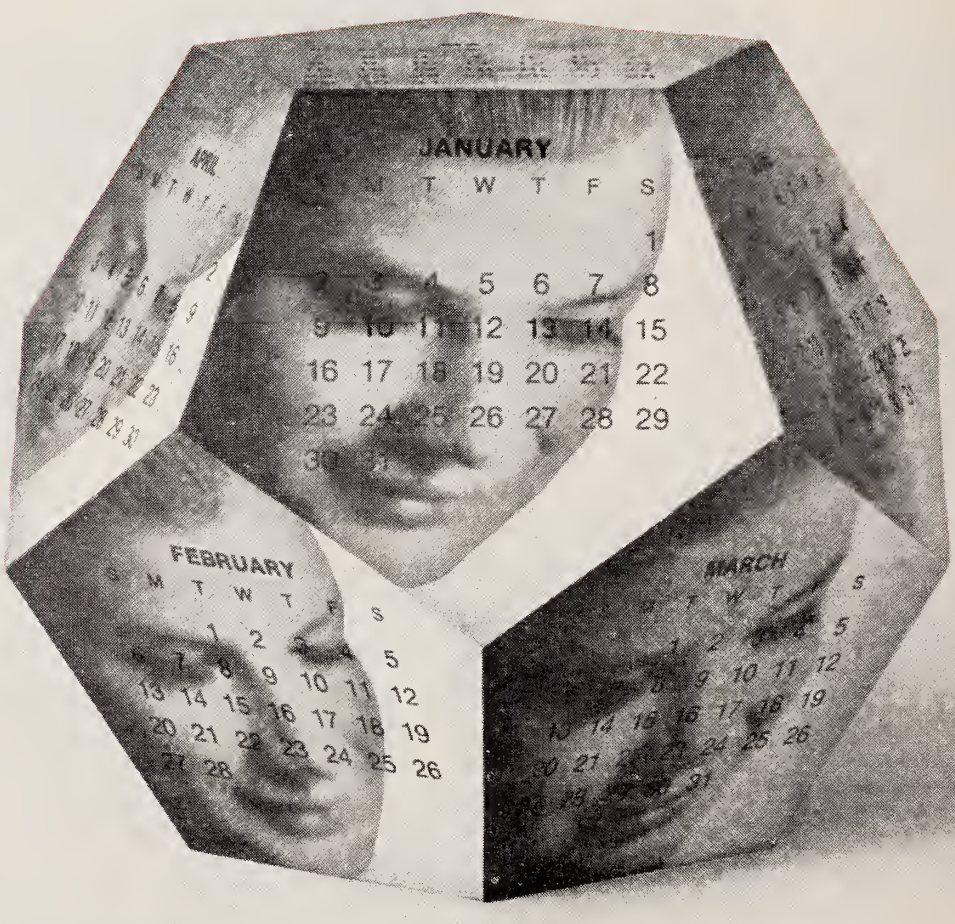
Priced for savings

Tetrex-F (tetracycline phosphate complex-nystatin) is lowest in cost—priced 20% lower than most tetracycline/antifungal products.

BRISTOL THERAPEUTIC SUMMARY
For complete information consult Official Package Circular.
Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections.
Contraindications: The drug is contraindicated in patients hypersensitive to its components.
Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex (tetracycline phosphate complex). With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).
Precautions: Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months.
Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.
Usual Adult Dosage: 1 capsule q.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals.
Supply: Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin. Oral Suspension, 60-ml. bottle. Each 5 ml. contains tetracycline equivalent to 125 mg. tetracycline hydrochloride and nystatin, 125,000 units.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York

What does it take to see her through those critical early months of oral contraception?



Contraindications: Thrombophlebitis or pulmonary embolism (current or past); cardiac, renal or hepatic dysfunction; carcinoma of the breast or genital tract; pregnancy; severe depression. **Precautions:** When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders careful clinical preevaluation is indicated. If liver or endocrine function tests are indicated, withhold Norinyl prior to tests. Patients with a history of epilepsy, migraine or asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian, adrenal or uterine function has been noted; however, long-range possible effect on these, and

What it takes...	the Norinyl 2mg. regimen provides
patient and physician confidence	*Virtually 100% effectiveness*...Norethindrone, an original development of Syntex, is the most widely researched progestational agent available for oral contraception. *No pregnancies have been reported* when the agent is used as directed.
fewest possible side effects	Low incidence of BTB and spotting, nausea and amenorrhea to minimize side effect problems and assure maximum patient cooperation.
no confusion about dosage	An unbreakable "confusionproof" package that makes it easy for patients to adhere to the prescribed dosage schedule; tablets individually sealed and numbered from 1 through 20; monthly calendar enables patient to keep a record of dosage by day and corresponding tablet number. 
a well-informed patient	An informative 64-page purse-size book for full patient understanding and cooperation. Available in quantities on your request. 

• tablets Norinyl® 2mg.

(norethindrone 2 mg. c̄ mestranol 0.1 mg.)

for what it takes to see her through

other organs, must await more prolonged observation. **Side Effects:** Changes in the menstrual cycle, symptoms resembling early pregnancy, weight gain, nausea, headache, dizziness, nervousness and irritability. **Dosage and Administration:** One Norinyl Tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.) **Availability:** Dispensers of 20 and 60 tablets; bottles of 100.

norethindrone—an original steroid from

SYNTEX LABORATORIES INC., PALO ALTO, CALIF.



An eminent role in medical practice

- Clinicians throughout the world consider meprobamate a therapeutic standard in the management of anxiety and tension.
- The high safety-efficacy ratio of 'Miltown' has been demonstrated by more than a decade of clinical use.

Miltown®
(meprobamate)

Indications: 'Miltown' (meprobamate) is effective in relief of anxiety and tension states. Also as adjunctive therapy when anxiety may be a causative or otherwise disturbing factor. Although not a hypnotic, 'Miltown' fosters normal sleep through both its antianxiety and muscle-relaxant properties.

Contraindications: Previous allergic or idiosyncratic reactions to meprobamate or meprobamate-containing drugs.

Precautions: Careful supervision of dose and amounts prescribed is advised. Consider possibility of dependence, particularly in patients with history of drug or alcohol addiction; withdraw gradually after use for weeks or months at excessive dosage. Abrupt withdrawal may precipitate recurrence of preexisting symptoms, or withdrawal reactions including, rarely, epileptiform seizures. Should meprobamate cause drowsiness or visual disturbances, the dose should be reduced and operation of motor vehicles or machinery or other activity requiring alertness should be avoided if these symptoms are present. Effects of excessive alcohol may possibly be increased by meprobamate. Grand mal seizures may be precipitated in persons suffering from both grand and petit mal. Prescribe cautiously and in small quantities to patients with suicidal tendencies.

Side effects: Drowsiness may occur and, rarely, ataxia, usually controlled by decreasing the dose. Allergic or idiosyncratic reactions are rare, generally developing after one to four doses. Mild reactions are characterized by an urticarial or erythematous, maculopapular rash. Acute nonthrombocytopenic purpura with peripheral edema and fever, transient leukopenia, and a single case of fatal bullous dermatitis after administration of meprobamate and prednisolone have been reported. More severe and very rare cases of hypersensitivity may produce fever, chills, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anuria, anaphylaxis, stomatitis and proctitis. Treatment should be symptomatic in such cases, and the drug should not be reinstituted. Isolated cases of agranulocytosis, thrombocytopenic purpura, and a single fatal instance of aplastic anemia have been reported, but only when other drugs known to elicit these conditions were given concomitantly. Fast EEG activity has been reported, usually after excessive meprobamate dosage. Suicidal attempts may produce lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse.

Usual adult dosage: One or two 400 mg. tablets three times daily. Doses above 2400 mg. daily are not recommended.

Supplied: In two strengths: 400 mg. scored tablets and 200 mg. coated tablets.

Before prescribing, consult package circular.

WALLACE LABORATORIES
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CM-5761



FUTURE MEDICAL MEETINGS

12TH CANCER SEMINAR

Mountain Shadows Resort
Phoenix, Arizona

March 26, 1966
9:45 A.M. - 4:30 P.M.

Speakers and Topics:

Victor A. Gilbertson, M. D.
University of Minnesota Medical School — "The Efficacy of Cancer Detection Centers"

Steven Schwartz, M.D.
Hektoen Institute — "Research in Leukemia"

Leonard Larson, M.D.
President, American Cancer Society — "Effects of Recent Legislation on Medical Activities"

Jane Wright, M.D.
New York University — "Current Aspects of Cancer Chemotherapy"

Registration Fee: $7.50
(Includes one lunch)

ARIZONA ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION AND RECREATION SPORTS MEDICINE DAY

April 20, 1966

Pioneer Hotel

Tucson, Arizona

Program sponsored by Pima County Medical Society Sports Medicine Committee, in conjunction with the Southern Arizona Heart Assoc.

NO REGISTRATION CHARGE

ARIZONA CHEST DISEASE SYMPOSIUM

March 26-27, 1966

Ramada Inn

Tucson, Arizona

Guest speakers and topics: William F. Miller, M.D., Dallas; Gustav Laurenzi, M.D., New Jersey — Chronic Obstructive Bronchopulmonary Disease; John Sheldon, M.D., Ann Arbor — Adult Allergic Problems in Respiratory Disease; Roger Mitchell, M.D. — Pulmonary Tuberculosis.

THE AMERICAN COLLEGE OF PHYSICIANS CANCER FOR THE INTERNIST

Postgraduate Course No. 12
February 21-25, 1966
Presbyterian — St. Luke's
Chicago, Ill.

The course will cover basic scientific and clinical aspects of cancer for the internist in the diagnosis and treatment of the cancer patent. Note: Contact Edward C. Rosenow, Jr., M.D., Executive Director ACOP, 4200 Pine Street, Philadelphia, Pa., for further information and registrations forms.

Physicians' Directory

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- *Professional card and classified space is available at $3.50 for the first fifty words or less; 5c for each additional word thereafter.*

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Fellow, American College of Allergists
Academy of Allergy

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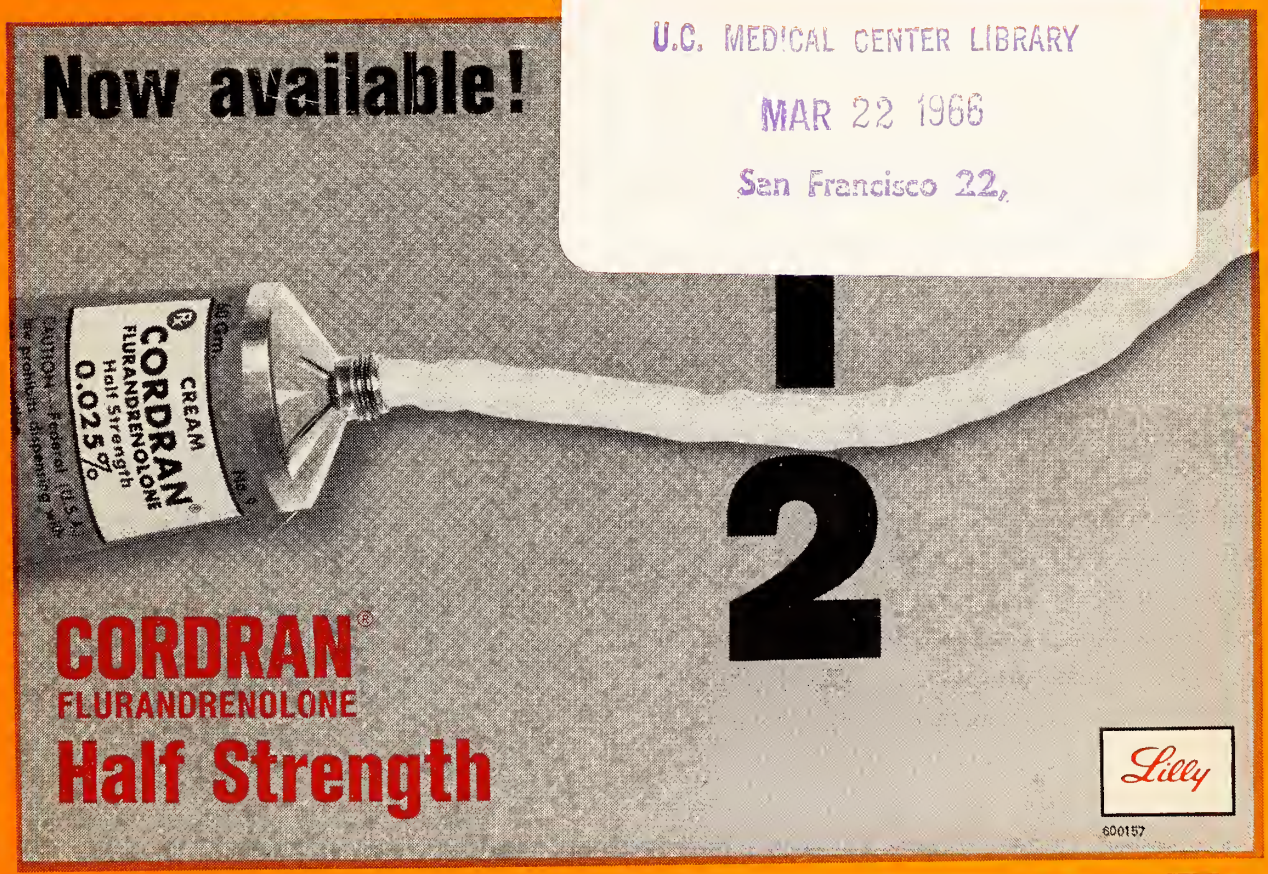
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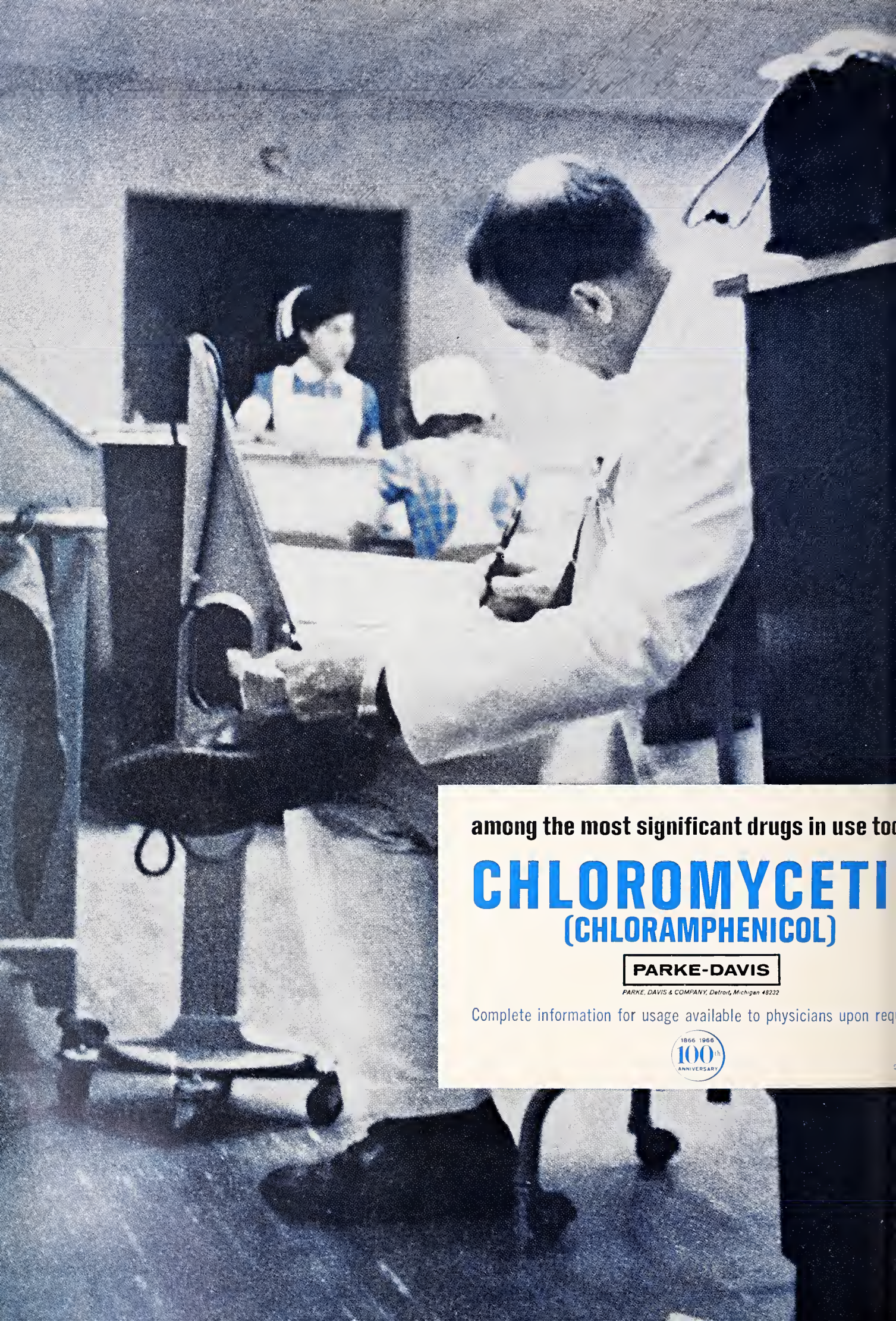
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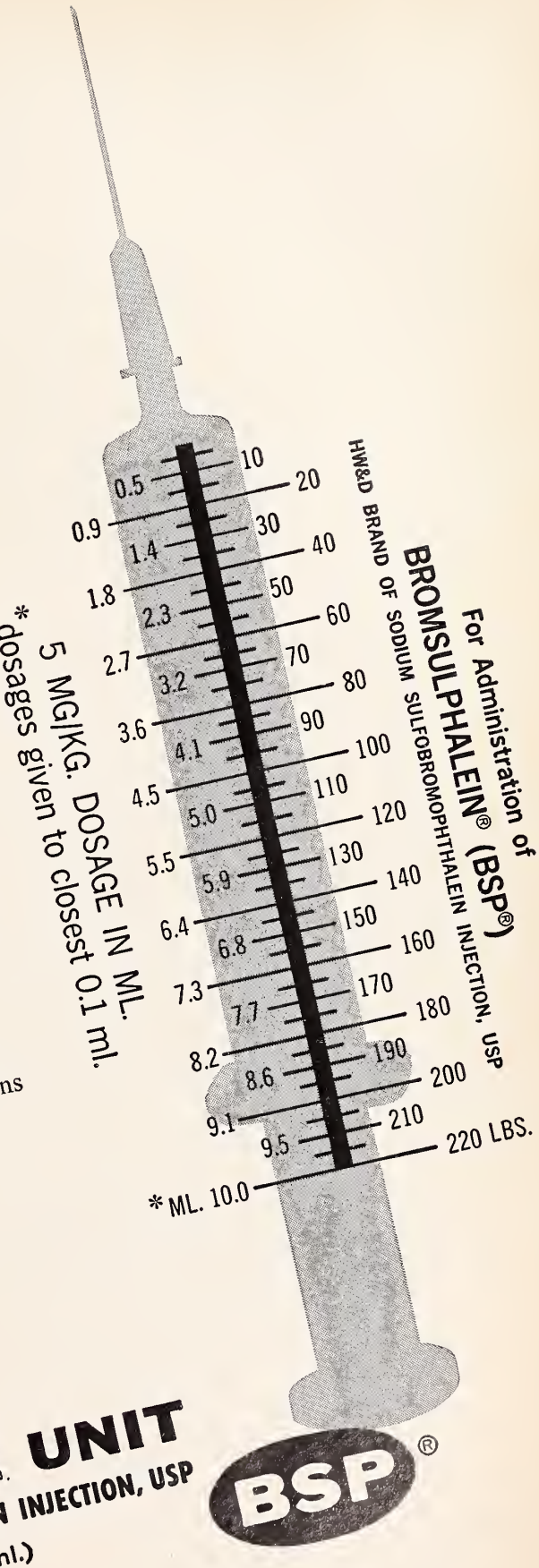
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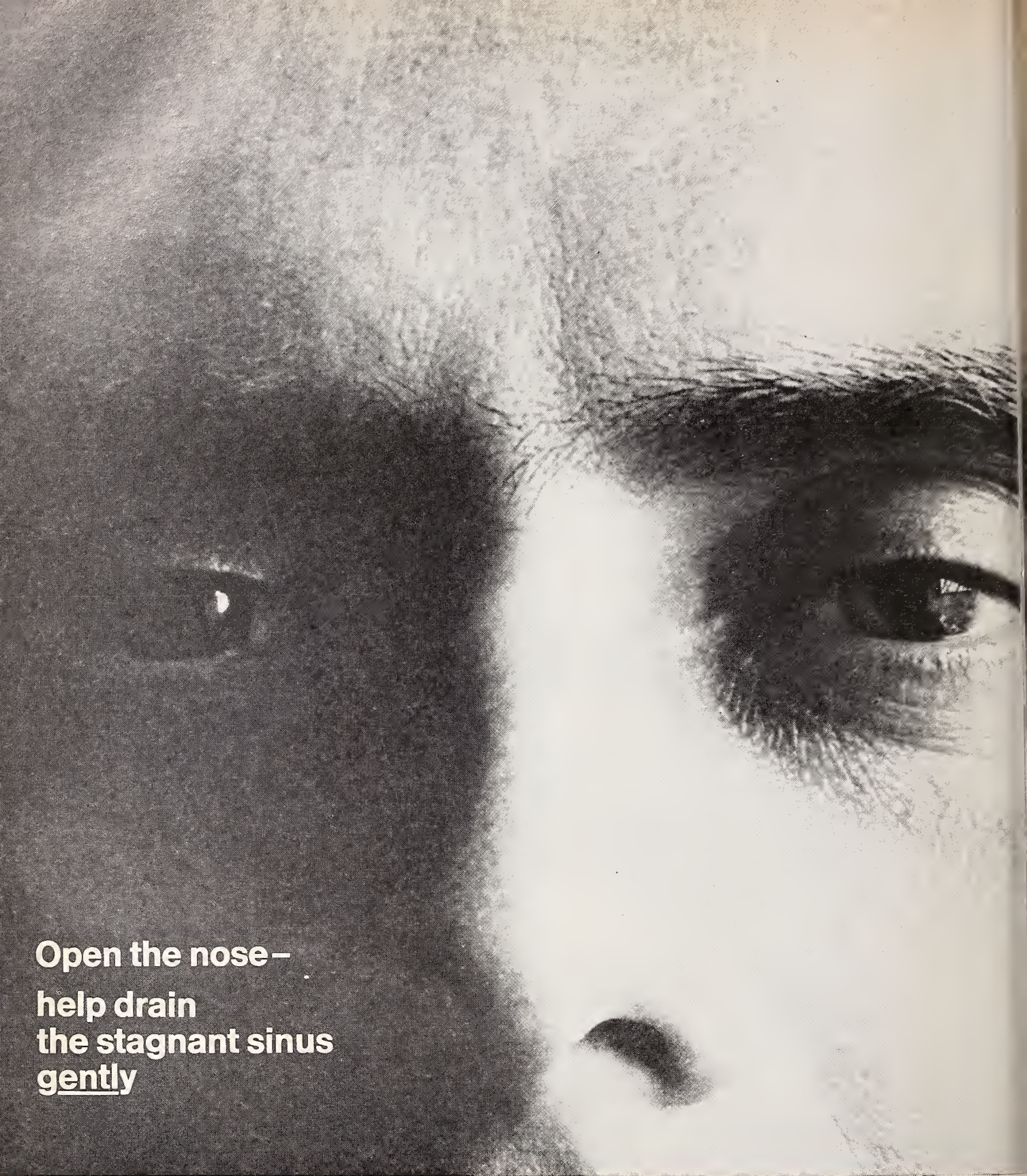
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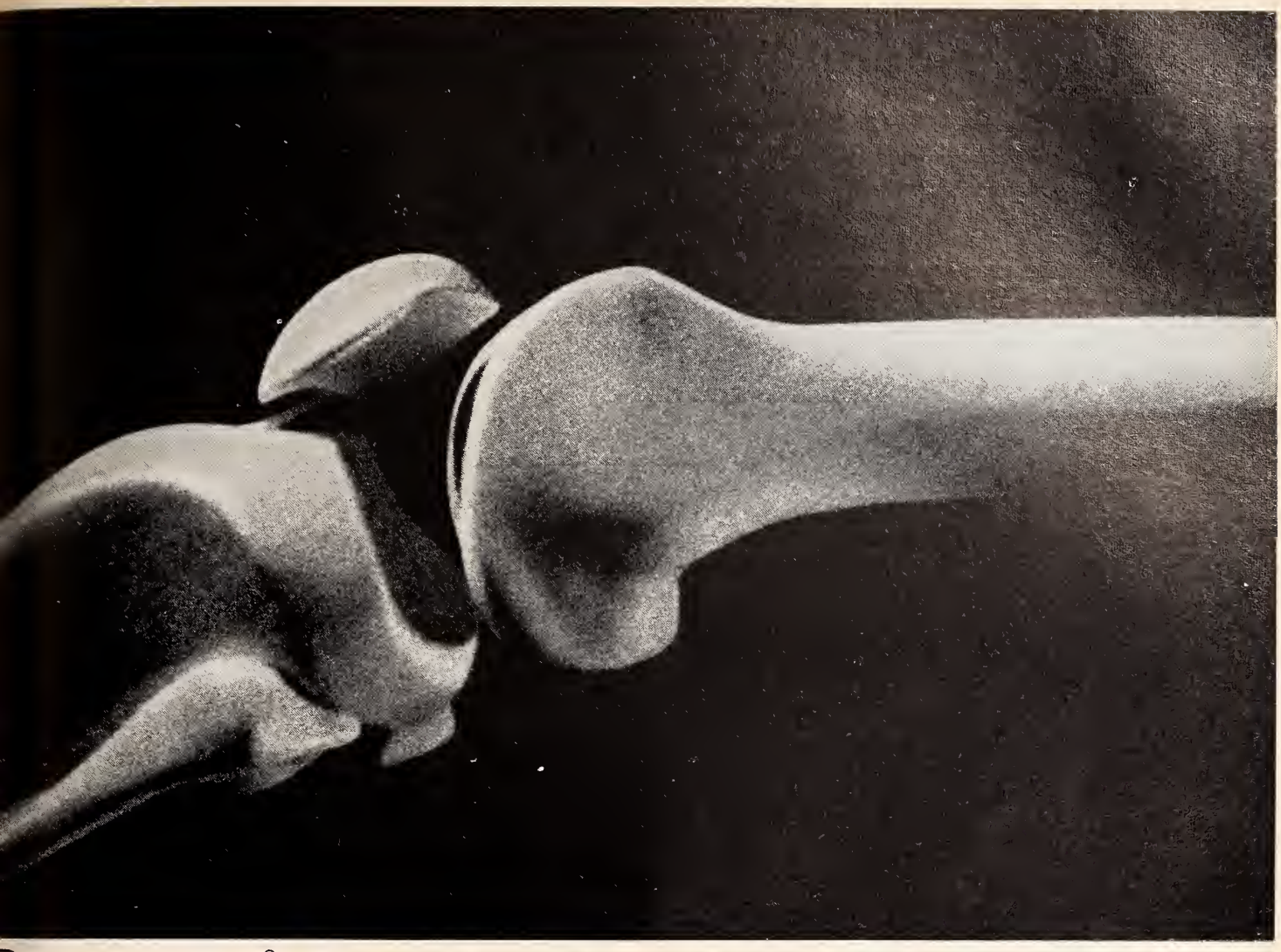


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YUMA: James Volpe, Jr., M.D., President, P. O. Box 1151, Harold N. Gordon, M.D., Secretary, 1832 8th Avenue, Yuma.
(Society Address — P. O. Box 4370, Kofa Substation, Yuma)

WOMAN'S AUXILIARY TO THE ARIZONA MEDICAL ASSOCIATION — 1965 - 1966

President Mrs. Hubert Estes (Mickie)
Route 2, Box 741-B, Tucson, Arizona

President-Elect Mrs. Robert G. Delph (Grace)
2019 North Crescent Drive, Flagstaff, Arizona

1st Vice President Mrs. Elvie B. Jolley (Mila)
Box 919, Bisbee, Arizona

2nd Vice President Mrs. Richard Dexter (Bobbe)
6842 East Tawa, Tucson, Arizona

Treasurer Mrs. Seymour Shapiro (Arline)
5433 East 8th Street, Tucson, Arizona

Recording Secretary Mrs. Charles Matheus (Marilyn)
2148 East 25th Street, Yuma, Arizona

Corresponding Secretary Mrs. Keith Treptow (Pat)
6940 E. Acoma Place, Tucson, Arizona

Director Mrs. Richard B. Johns (Ruth)
508 West Rose Lane, Phoenix, Arizona

Director Mrs. Juan Fonseca (Virginia)
Route 2, Box 741, Tucson, Arizona

SOCIEDAD MEDICA DE ESTADOS UNIDOS DE NORTE AMERICA Y MEXICO
MEDICAL SOCIETY OF THE UNITED STATES & MEXICO

President Dr. L. Maxwell Lockie
130 Morris Avenue, Buffalo 14, New York

President-Elect Dr. Alfonso Topete Duran
Edificio Professional, Juarez y Pavo, Guadalajara, Jalisco, Mexico

Vice President Dr. James Nauman
1603 North Tucson Boulevard, Tucson, Arizona

Secretary for the United States Dr. Earl J. Baker
550 West Thomas Road, Phoenix, Arizona

Secretary for Mexico Dr. Felix Michel
Pavo 112, Guadalajara, Jalisco, Mexico

Treasurer for the United States Dr. Lucy A. Vernetti
333 West Thomas Road, Suite 207, Phoenix, Arizona

Treasurer for Mexico Dr. Eduardo Gonzalez Murguia
Juarez 673, Guadalajara, Jalisco, Mexico

Executive Secretary for Mexico Mr. Alfredo E. Patron
Mazatlan, Sinaloa, Mexico

BENEVOLENT AND LOAN FUND COMMITTEE

Meeting of the Benevolent and Loan Fund Committee of The Arizona Medical Association, Inc., held Sunday, February 6, 1966, in the Central Office of the Association, Suite 201, Safari Building, 4601 North Scottsdale Road, Scottsdale, Arizona, convened at 10:05 a.m., Daniel T. Cloud, M.D., Chairman, presiding.

ROLL CALL

PRESENT:

Members: Drs. Buffmire, Donald K.; Cloud, Daniel T., Chairman; Dudley, Jr., Arthur V., Treasurer; Henderson, Charles E., Secretary; Jarrett, Paul B., President-Elect; Ochsner, 11, Albert J.

STAFF:

Messrs. Carpenter, Robert, Executive Secretary; Robinson, Bruce E., Assistant Executive Secretary.

GUEST:

Mr. Mislicky, Roman G., Assistant Vice President, Manager — Professional Services Division, Valley National Bank.

EXCUSED:

Members: Drs. Neubauer, Darwin W.; O'Hare, James E., President.

MINUTES

Aproved minutes of the meeting of the Benevolent and Loan Fund Committee held July 18, 1965, without reading.

MEDICAL STUDENT LOANS GRANTED

Reaffirmed approval, by mail vote, of the following medical student loans to residents of Arizona between the period July 18, 1965, and February 6, 1966:

Fones, Donald W., U. of Colorado, 10-19-65; Gibbs, James A., Creighton U. (Neb.), 8-9-65; Herrera, Maria Diaz, Woman's Med. Col. of Penn., 9-24-65; Hooker, Keith R., M.D., Riverside Cty. Gen. Hosp., 11-12-65; Jasperson, Thomas A., M.D., St. Luke's Hosp. (Mo.), 11-16-65; Kaesler, Kelly, U. of Tennessee, 8-3-65; Kirk, Leslie G., U. of Oregon, 10-12-65; Mobley, David F., U. of Tennessee, 9-24-65; Scribner, Robert G., U. of Colorado, 10-22-65; Stewart, Jim Noble, Baylor U. (Texas), 9-9-65; Wenham, John K., U. of Oregon, 9-9-65.

MEDICAL STUDENT SCHOLARSHIPS GRANTED

Reaffirmed approval, by mail vote, of the following medical student scholarships, granted residents of Arizona entering first-year medical school, between the period July 18, 1965, and February 6, 1966:

Brichta, Louis F., Baylor University (Texas), 9-22-65; Herrera, Maria Diaz, Woman's Medical College of Penn., 9-22-65; Miller, Daniel R., San Francisco Med. Center, U. of Cal., 10-19-65; Stewart, Jim Noble, Baylor University (Texas), 12-28-65.

FINANCIAL REPORT

VNB Trust Account No. 120-03068 reflects a cash balance as of November 30, 1965, of $4,808.87. Outstanding loan balance as of November 30, 1965: $33,312.14.

VNB Trust Account No. 170-04714 reflects a cash balance as of January 31, 1966, of $7,643.81 including interest earned through October 29, 1965. On the basis of the VNB conversion factor of 12.5, amount available for loans: $95,547.62. Loans authorized to January 31, 1966: current amount outstanding — $61,121.32; amount authorized but not disbursed: $3,600.00; total commitment: $64,721.32. Maximum available to loan as of January 31, 1966: $30,826.30.

On the basis of authorization of the Board of Directors, November 24, 1963, "that the total amount of the then outstanding student loans to which the Association's guarantee would apply, would at no time exceed sixty-five percent (65%) of the then annual budget," the budget for 1966 being $196,160.00, such maximum authorization, as of 1966, would be $127,504.00. Taking into account that as of January 31, 1966, a total sum of $64,721.32 is currently outstanding, including an amount authorized but not yet disbursed, the maximum authorized to loan, as of January 31, 1966, totals $62,782.68. This maximum fund authorized is, of course, subject to available funds.

Funds available for scholarship grants, as of January 31, 1966, total $10,914.26. Such authorized grants are limited to $500.00 per student applicant.

MEDICAL STUDENT LOAN REPAYMENTS

Reported that the loan of David T. Eicher ($1,677.48) has been paid off; also, payments are being made on loans of Paul B. Comer ($924.70) and Sid F. Mauk, III ($271.89). RECEIVED.

POLICY — MEDICAL STUDENT LOANS/SCHOLARSHIPS

VNB Trust Account No. 120-03068

Approved the following recommendations associate with the initial medical student loan program currently designated VNB Trust Account No. 120-03068:

1. All borrowers of the initial loan program and first VNB Trust Account to be dealt with alike, exceping for those who have previously repaid their loan(s) with interest, or those that have re-negotiated their loans and are currently committed to a repaymcnt schedule.

2. On all current loans of the initial loan program and first VNB Trust, simple interest thereon to be charged at rate of 6% per annum from date of completion of first-year internship until paid, said interest to be paid semi-annually beginning with the first year of active practice.

3. On all current loans of the initial loan program and first VNB Trust, payment of the principal of the loan is to begin at the rate of not less than $1,000.00 per year plus interest in full on amount repaid beginning with the first year of active practice.

4. In the best interest of the borrower, current notes are to be subject to re-negotiation when necessary on action of the Arizona Medical Association, Benevolent and Loan Fund Committee; military service, residencies, etc., to be given special consideration.

5. Payments of interest and principal to be deposited and retained in VNB Trust No. 120-03068 until such time as disposition thereof is authorized by the Arizona Medical Association.

6. In the instance of requested and approved re-negotiation of a note(s) where borrower is prepared to make payments, such re-negotiation shall continue until fully paid under VNB Trust No. 120-03068. Should borrower not be in position to commence repayment, then and in such instance re-negotiation requested and approved will be consummated through transfer of the account to the new VNB Trust Account No. 170-04714.

It was regularly moved and unanimously carried that these recommendations be presented by the Treasurer to the Board of Directors for approval, with the stipulation that the sixty-five percent (65%) limitation be increased by the amount of monies being transferred from VNB Trust No. 120-03068 to VNB Trust No. 170-04714.

Military Service — Active Practice

It was regularly moved and unanimously carried that, within legal requirements and those stipulated in agreements executed between this Association and the Valley National Bank as Trustee, it is the recommendation of this Committee that medical-student-loan borrowers pay interest on such loans while in military service and make some attempt to pay part of the principal, such military service being considered "active practice," to consummate, as rapidly as possible, repayment of these loans, making such capital funds available to other students seeking similar assistance.

Scholarship Program

Following review, it was determined to continue the Scholarship Program, funds being derived from earned interest on savings, to the full extent of available funds and qualified applicants approved therefor.

Minimum Scholastic Average

It was regularly moved and unanimously carried that the Scholarship Program be limited to those students maintaining a grade average of "B," or better.

MEDICAL STUDENT LOAN APPLICATIONS FOR REVIEW

Cyril James Statt, currently attending Boston College School of Arts and Sciences, Chestnut Hills, Massachusetts, anticipates completion of his studies in June of this year, has filed an application for a medical student loan. He states he has been accepted and will enroll this fall at the State University of New York — Upper State Medical Center — College of Medicine in Syracuse, New York. His parents have left New York establishing Arizona residence at 500 West Wagon Wheel Drive, Phoenix, in August of 1964. Mr. Statt's entire education has been pursued in New York State and Massachusetts. Determined to accept his "residence" currently as that of Arizona for the purpose of meeting established local requirements. His application will be processed on or about July 1, 1966, following completion of his studies at Boston College.

SCHOLARSHIP APPLICATIONS FOR REVIEW

Cyril James Statt, in addition to his medical student loan application previously reported, files an application for a scholarship. His Arizona residence will be considered as established. Application will be processed on or about July first next following completion of his studies at Boston College.

William B. Dabney of 297 Whitton Street, Sierra Vista, Arizona, having completed his studies at the University of Arizona (Tucson) receiving the degree of Bachelor of Arts, May 26, 1965, has applied for a scholarship. The University of Tennessee College of Medicine advises he is expected to enroll in the College of Medicine in its March, 1966, class, following review of application and credentials, award was granted.

OTHER BUSINESS

Loan/Scholarship Program

The Committee reviewed in depth the progress to date of both the medical student loan and medical student scholarship programs. It was concluded each are considered very satisfactory and worthwhile. From the banking viewpoint, Mr. Mislicky expressed similar satisfaction.

MEETING ADJOURNED AT 12:30 P.M.

Charles E. Henderson, M.D.
Secretary

MEDICAL ECONOMICS COMMITTEE

Meeting of the Medical Economics Committee of The Arizona Medical Association, Inc., held Sunday, January 23, 1966, in the Central Office of this Association, Suite 201, Safari Building, 4601 North Scottsdale Road, Scottsdale, Arizona, convened at 10:35 a.m., Ian M. Chesser, M.D., Chairman, presiding.

ROLL CALL

PRESENT:

Members: Drs. Blute, Jr., James F.; Chesser, Ian M., Chairman; Hardenbrook, Richard G.; Henderson, Charles E., Secretary; Hoffmann, George L.; Jarrett, Paul B., President-Elect.

STAFF:

Messrs. Carpenter, Robert, Executive Secretary; Robinson, Bruce E., Assistant Executive Secretary.

GUEST:

Mr. Foster, John C., Executive Director, Arizona Blue Shield Medical Service.

EXCUSED:

Members: Drs. O'Hare, James E., President; Rhu, Jr., Hermann S.; Ricker, John H.

MINUTES

Minutes of the meeting of the Medical Economics Committee held September 12, 1965, approved.

MEDICARE CONTRACT — OFFICE OF DEPENDENTS' MEDICAL CARE

Contract No. DA-05-114-MD-12

Reported that Supplemental Agreement I. D. No. 1202 extending ODMC Contract from September 1, 1964, to February 28, 1966, had been duly executed by this Association, the Fiscal Administrator — Arizona Blue Shield Medical Service, and the United States Government—Office of Dependents' Medical Care (Contract No. DA-05-114-MD-12), November 17, 1965. RECEIVED.

ODMC — Fee Schedule Survey

Results of the Dependents' Medical Care Fee Schedule Survey undertaken and completed by the Fiscal Administrator—Arizona Blue Shield Medical Service—received, copies having been previously distributed among the member of this Committee for review.

John C. Foster, Executive Director — ABSMS, stated that between 80% and 90% of ODMC care is in the field of Maternity Care; that the survey undertaken and completed included only those procedures (33-34) being done and among those physicians doing same; that of the 773 questionnaires mailed, 335 responses were received and included in the tabulation, about one-third of the physicians; and that said tabulation includes, in addition to the code number and procedure or service, (1) the present dependents' medical care fee, (2) number of doctors reporting, (3) normal charges — average— median — mode, and (4) a fee recommended for consideration.

Contract No. DA-05-114-66-MD-87

Submitted for renewal consideration by ODMC is Contract No. DA-05-114-66-MD-87 for the period March 1, 1966, through February 28, 1967.

Dr. Chesser reported that a comparison of fees was made a year or two ago at which time it was concluded the fees averaged 4.60 based upon a relative value or 5.20 taking into account collection costs. Following conference with Brig. Gen. Norman E. Peatfield and Lt. Col. William H. Hayes, both of ODMC, a satisfactory adjustment has been agreed upon as regards maternity care fees; also, post-operative care for patients which extends beyond the period defined in the manual. In this latter instance, these will be handled as "special cases" to include X-rays, follow-up on open heart surgery, etc. They will be referred to the professional committee of the fiscal administrator and, upon its recommendation, payment will be made therefor.

Determined to recommend to the Board of Directors of the Association that the ODMC contract with the modifications and agreement be executed for a period of one year beginning March 1, 1966.

While the fee schedule for ODMC may be considered favorable at the present time, the Committee felt that some consideration should be given to application of a "cost of living index," as is customary in other negotiated contracts outside of Medicine. Certainly, this could be determined through statistics available published by the U. S. Department of Commerce (Bureau of Labor Statistics or Consumer Price Index), or through the Valley National Bank, or the universities' economic departments. The Chairman agreed to pursue such study.

MEDICARE P. L. 89-97

John C. Foster reviewed progress with regard to studies being made, authorized by both Boards of Directors—that of this Association and that of Blue Shield—relating to the "prevailing fee" (ordinary, usual and customary) concept as may be applied in the operation of Medicare (P. L. 89-97). Questionnaires have been distributed to approximately 1,800 doctors of medicine and doctors of osteopathy. Responses have been received from about 1,000, which does not appear sufficiently conclusive. It is the hope additional replies will be received to make a more worthwhile study and that Mr. Foster will be in position to submit in writing, possibly within two weeks, his report for inclusion in the report of this Committee to the House of Delegates. Such report is required to be filed by March first.

A letter was received, forwarded by George W. King, M.D., of Tucson, calling attention to certain items such as "special medical procedures — Code 0028" included in the prevailing fee survey, which should be given special consideration in the light that a copy of such record may be requested by reviewing authorities, especially Blue Shield. Cost of preparation should be reimbursed. Mr. Foster commented that he felt that, administratively, the problem could be resolved with the cooperation of Blue Cross.

It was determined that the Chairman would respond in writing to Dr. King.

RETIREMENT INCOME THROUGH BLUE SHIELD

Presented for discussion was a reprint from "Medical Economics, September 9, 1963" reporting on a "Retirement Income Through Blue Shield" plan operating in Washington State guaranteeing retirement, disability and death benefits for doctor-of-medicine patients. Briefly, the physicians have agreed to set aside a certain percent of fees payable by Blue Shield for deposit into an appropriate retirement-investment program. The purpose of presenting the subject is due to the fact that a number of doctors, since reading the article, have inquired as to its feasibility. It is important that, before pursuing such course, approval of the plan should be obtained from the Internal Revenue Service; and, while Blue Shield activity is administrative only, assurance should be obtained, likewise, protecting the Blue Shield program to assure that it will not lose its tax-exempt status. Such program, when activated, would be, in all likelihood, handled through a local bank, possibly, providing a program of equal parts of insurance and investments as a trust account.

If it is desirable to pursue the subject, it was suggested that Albert G. Schmerge, representing Group Health of New York, 60 East 42nd Street, New York, New York, is quite knowledgeable of such operation and may be available to present their experience; likewise, Howard Hassard, Executive Director of the California Medical Association and General Counsel of the National Association of Blue Shield Plans, has considerable legal background concerning the matter, and copies of a recent report released by him in December of last year will be obtained and circulated among the members. Mr. Foster agreed to keep the membership informed as to any further developments in this regard making it clear that he is not promoting such program but would be available to administer it on direction of the physicians providing there would be no loss of tax advantages to the Arizona Blue Shield Plan.

ArMA BOARD OF DIRECTORS ACTIONS

As the result of actions of this Committee during its last meeting, the Board of Directors of this Association, in meeting held September 19, 1965, declared: (1) that it does not see any evidence of unethical practice in the VNB Credit Card Program proposed to be extended to the doctors of medicine providing the names of individual physicians will not be listed as participants of the Program; and (2) that the proposed prepaid out-patient office visits medical plan for the Grand Canyon community to include teachers and dependents of the school system, Western Equities, and the National Park Service does not meet the "free choice of physician" concept. RECEIVED.

HIC INSURANCE CLAIM REPORTING FORM

The Chairman reported that, as previously directed by the Committee, he has investigated the proposed simplified and standardized health insurance claim form prepared by the Health Insurance Council recommended for adoption by this Association. It is understood the form has the approval of the Council on Medical Service of the American Medical Association, which action was taken in November of 1964. It is considered quite adequate, simplified and certainly an improvement over the "Physician's Standardized Statement for Health and Accident Claims" approved by ArMA and in use for many years past. A pamphlet was presented prepared by HIC in 1965 entitled "A Report to the Physician" explaining the purpose of the new form, and it was agreed effort would be made to obtain copies for distribution among the members of the Board of Directors.

By motion regularly made and unanimously carried, it is the recommendation of this Committee to the Board of Directors that the Arizona Medical Association adopt the "Attending Physician's Statement — Health Insurance Claim — Group or Individual" form prepared by the Health Insurance Council, approved by the Council on Medical Service of the American Medical Association; and that, on adoption by the Board, the form be made available by the Association to its membership at a cost to be determined by the Board of Directors taking into consideration a fair profit to cover administration and mailing.

MEDICAL EXAMINATION FORM— BOY SCOUTS

M. J. Sharp, M.D., of Pocatello, Idaho, a volunteer Scouter in the Boy Scouts of America, impressed by the need of some unified medical form to record examinations given to members of the Boy Scouts, Girl Scouts, church leagues and other youth organizations prior to participation in these organizational physical activities, submits a proposed "Unified Personal Health and Medical Record" form, which has the endorsement of the Idaho State Medical Association and the Idaho Academy of General Practice. It is being used quite successfully in Idaho, and it is the hope that similar application throughout the United States would be beneficial. The reaction thereto by this Association is sought.

Levi S. Young, Director of Camping and Activities of the Theodore Roosevelt Council, Inc., Boy Scouts of America, expresses the view that the Health and Medical Record form adequately meets the needs for scouting purposes; however, on review by the local chapter of the American Camping Association, it is strongly recommended that Dr. Sharp present this form to the national office of ACA, Bradford Woods, Martinsville, Indiana.

It is the feeling of this Committee that approval or disapproval of the "Unified Personal Health and Medical Record" form does not fall within its province, however, it was directed that the matter be referred to the Professional Committee for whatever action it deems indicated expressing the thought that the form appears to be acceptable for the purpose intended.

OTHER BUSINESS

Medical Reporting Compensation

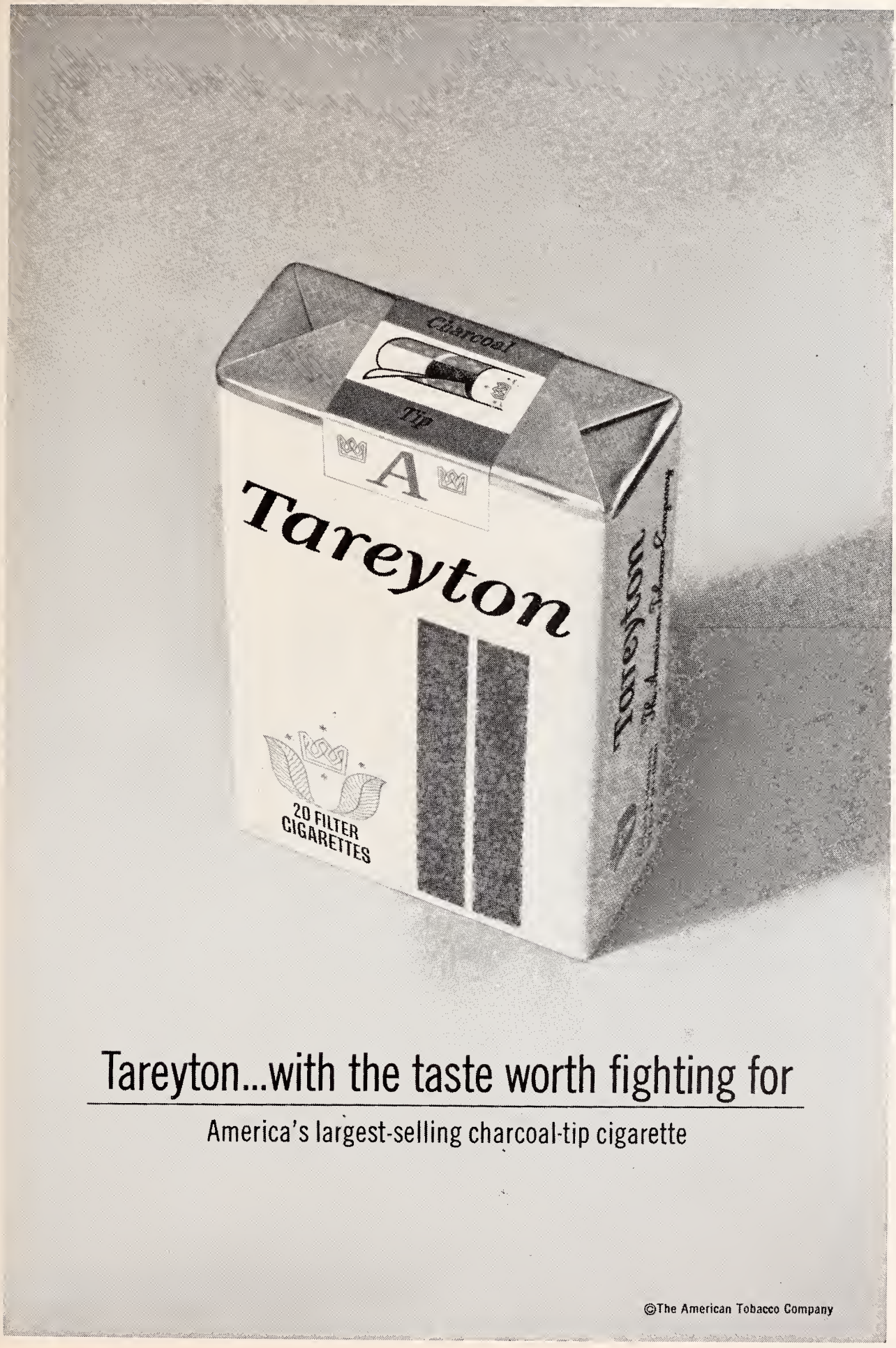
Dr. Hoffmann presented for consideration the subject of compensation for preparation of medical reporting requested by the various governmental agencies and agreed to give further study thereto reporting back to the Committee at its next meeting.

University of Arizona Continuing Education

Dr. Chesser reported that there had been referred to him the subject of sponsorship of a one-day meeting of doctors and medical administrative personnel proposed by Mr. L. L. Darcy, Extension Services of the University of Arizona, the purpose of which would be to "update attendees on tax problems, medical office administration, governmental policies, medical jurisprudence, and other subjects of current interest to the medical profession." While Dr. Chesser felt such program could be exceedingly valuable to the medical profession, it is questionable whether the subject fell within the province of this Committee. It was pointed out that this subject was on the agenda of the Professional Committee for discussion during its forthcoming meeting on January 30, 1966. The thought was expressed that, possibly, the subject matter should be referred, also, to the Scientific Assembly Committee for its consideration.

MEETING ADJOURNED AT 1:30 P.M.

Charles E. Henderson, M.D.
Secretary


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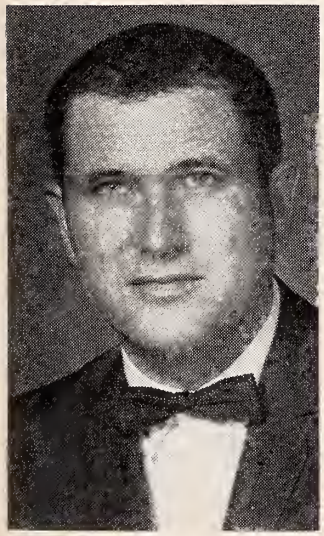
Lilly

MEDICINE AND THE BIBLE



For about a year, Doctor Davis has been working on a manuscript for a book on medicine and the Bible. I have asked him to prepare an article relating some of the events and subjects from the forthcoming book.

The Editor



C. Truman Davis, M.D., M.S.

MOST of us visualize history as a series of events superimposed upon a time line. This article will consist of a series of medico-historical vignettes from the Bible superimposed upon a time line extending from 2000 B. C. to the First Century A. D.

This approach, though it will unfortunately preclude our studying any era or any subject in depth, will enable us to achieve certain objectives: It will give us a view of medicine from the very dawn of history; it will throw light on some of the fascinating medical events of the Old Testament; it will give us a background for better understanding medicine in the Christian era.

Let us begin with Abraham, the father of the Hebrew people. Remember, Abraham came from Ur in Chaldea — later to be called Babylonia. We get a glimpse of medicine in this era through the famous code of Hammurabi — preserved in cuneoform writings and almost exactly contemporary with Abraham.

Concerning the wounds resulting from operations it is written in the Code: "If a physician shall produce on anyone a severe wound with a bronze operating knife and cure him, or if he shall open an abcess with the operating knife and preserve the eye of the patient, he usually

2000 B. C.	1500 B. C.	1141 B. C.	1095 B. C.	1013-973 B. C.
Babylonia Abram (Abraham) King Hammurabi	Egypt Ebers & Edwin Smith Papyri Moses — Desert Wanderings Sanitary Code	Samuel Warfare with the Philistines	Saul	Nabal King David

680 B. C.	588 B. C.	520 B. C.	445 B. C.	460-350 B. C.	400-300 B. C.
Sennacherib Isaiah — King Hezekiah	The Captivity in Babylon	Return from Captivity Temple Rebuilt	Nehemiah Walls of Jerusalem Rebuilt	Hippocrates	Greek Influence

190 B. C.	200-55 B. C.	5 B. C. - 29 A. D.	80 A. D.?
Apocrypha	Mediterranean World Falls Under Roman Rule	Jesus the Christ	Paul of Tarsus Loukanos the Physician

Time Line

shall receive ten shekels of silver; if it is a slave, his master shall usually pay two shekels of silver to the physician.

"If a physician shall make a severe wound with an operating knife and kill him, or shall open an abcess with an operating knife and destroy the eye, his hands shall be cut off.

"If a physician shall make a severe wound with a bronze operating knife on a slave of a free man and kill him, he shall replace the slave with another slave. If he shall open an abcess with a bronze operating knife and destroy the eye, he shall pay the half of the value of the slave.

"If a physician shall cure a diseased bone or a diseased organ, he shall receive five shekels of silver; if it is a matter of a freed slave, he shall pay three shekels of silver; but if a slave, then the master of the slave shall give to the physician two shekels of silver."

In this same code are indicated with a particular exactness the diseases of the slave which can annul the validity of a lay contract; two of these are cited frequently under the names of "bennu" and "siptu", identified by some as epilepsy and leprosy. The expulsion of lepers from the community — "Nevermore shall he know the ways of his abiding place" — indicates that the Babylonians were aware of the contagiosity of leprosy and took measures to combat it.

We shall now move without event through half a millenium. Parenthetically, let us realize that we tend to pass blythely over long time spans when they occur in the distant past. Five hundred years is longer than the white man has inhabited the American continents.

You are, of course, familiar with the story of Joseph, his entrance into Egypt as a slave and eventually becoming a high official in Pharoah's court.

Following Joseph, there occurred a migration of the Hebrews into Egypt. At first they were a favored people, but eventually "there arose up a new king over Egypt which knew not Joseph" (Exodus 1:8) and the people were enslaved.

Then we come to Moses, a Hebrew, reared as a prince of Egypt, educated in Pharoah's palace. What medical knowledge did he have available to him? Here we have excellent examples of at least the *minimum* medical knowledge available. Two well-preserved medical texts — the most ancient known to man, are the Ebers and Edwin Smith papyri, found in a tomb in Thebes in 1862.

We have no idea of the *possible* knowledge which could have been available, since these are isolated writings. Suppose an archaeologist 3500 years from now unearthed a text on chiropractic or a folk medicine book by a physician advocating honey and vinegar for all ailments, and had no other material available concerning medicine in our age. This would hardly give a valid picture of twentieth century medicine.

The Edwin Smith papyrus, a treatise on wounds and injuries, gives a clear description of forty-eight cases. For example: "A gaping wound of the head, smashing the skull", then follows a description of signs and symptoms and methods of examination. Finally the writer gives a prognosis by saying, "A wound I will treat" or "A wound I will not treat". The treatments were straightforward, without magic or incantation. Cautery was advocated for controlling hemorrhage, a technique which, as we know, is still used in many surgical procedures today. Gaping wounds were brought together with adhesive plaster, and some authorities believe sutures were used. In a skull fracture, with a fragment of bone pressing against the brain, elevating the fragment was advised just as is

done in modern neuro-surgical practice today. A perforating wound into the esophagus was tested by having the patient drink water and seeing if it came out through the wound; realistic for that day, but fortunately, better methods are available today. Very accurate descriptions of methods to reduce a dislocated joint were given. The method advocated for the reduction of a dislocated jaw is precisely that used today. A splint consisting a roll of stiff material was advised for broken bones. The Egyptians had a name for the internal organs of the body but knew nothing of their real function. However, a section of the papyrus does describe the pulse and its association with heart action. This was three thousand years before the circulation of the blood was described by Harvey!

Let us now examine the sanitation laws of Moses as recorded in Deuteronomy and Leviticus; the most enlightened public health rules known to man until the Twentieth Century. On the march, during the forty years in the wilderness, strict laws for the preparation of food, the purification of water supplies, and the disposal of human waste were enforced. This, with no knowledge of bacteria and their function in the cause of disease. Later, after cities were occupied, rigid rules for the burial of the dead and the burning of refuse were enforced without knowing anything about the role of the fly in carrying disease.

Strict sexual morality kept venereal disease under control and there were elaborate rules for the ostracizing of lepers. The Hebrews also realized that certain cases of "leprosy" seemed to get well, so criteria were established for examination by a priest and being declared clean. We now know that these so-called "cured" cases were some form of skin disease other than leprosy.

There were innumerable incidents related in the Old Testament that have medical significance. We will discuss just a few and attempt to analyse them in the light of modern medical science:

In the First Book of Samuel there is a fascinating story. The Philistines had defeated the Israelites in battle, had captured the Ark of God and put it in one of their pagan temples. No worse desecration was conceivable to the Hebrews and they were demoralized. Then, "The hand of the Lord was heavy upon them of Ashdod, and He destroyed them and smote them with emerods*" (I Samuel, 5:6). In the Greek Septuagint there is added: "And the land swarmed with mice". (H:Akbar – mice, rats.)

The Philistines believed that this plague was a judgement on them for taking the sacred ark of the Hebrews, so they put it in a cart pulled by two milk cows and sent it back to the Hebrew lines. The most intriguing part of this story is that the priests ordered that ten golden images be sent back with the ark – five images of the tumors and five of mice. Here we have a classical description of the bubonic plague. The bacillus of plague is carried by the rat flea; when the rat dies the fleas leave the body. If the flea then bits a human, the disease can be transmitted to the bloodstream of the new host. The Philistines apparently knew the association of rates with the plague – something which modern medicine didn't discover until the end of the Nineteenth Century!

An excellent clinical description of apoplexy, or stroke, is given in the account of the death of Nabal in the First Book of Samuel. After he had offended King David, Nabal went home and drank himself into a stupor. "And it came to pass in the morning, when the wine was gone out of Nabal, that his wife told him of these things, that his heart died within him and he became as a stone. And it came to pass about ten days after that the Lord smote Nabal, and he died": (I Samuel, 25-37-38). The ancient Hebrews did not understand the function of the brain and associated unconsciousness with the heart. The bad news, possibly associated with an elevation in blood pressure, causing a sudden loss of consciousness and death ten days later forms a characteristic picture of a cerebro-vascular accident.

King Saul would be diagnosed today as a typical example of manic depressive psychosis. The periods of extremely productive activity alternating with periods of deep gloom are classical for this type of insanity. The outbreaks of homicidal violence for no particular reason (as when he hurled the javelin at David), the delusions that David and the people were plotting against him, together with his terminal suicide, are unmistakable.

* The word **ophalim** was translated in the Authorized Version as "emerods" or hemorrhoids. It simply means a swelling or tumor and is so translated in later versions. It could easily, therefore, refer to the discrete swelling in the groin produced by the adenopathy of bubonic plague.

One of the most dramatic plagues of all recorded history is described in the Second Book of Kings. The powerful Assyrian army, under the leadership of their king, Sennacherib, had invaded Judah. We know from recent archaeological findings that the walled cities of Judah fell one by one before the might of the engines of destruction of the Assyrians. Finally only Jerusalem stood in the way of the conquerors. This great army with its chariots, its wheeled battering rams, its scaling ramps, and heavily armored soldiers, moved into position around the great stone walls of Jerusalem. Behind the army came the wagons with food and water to supply the troops. Then; "And it came to pass that night, that the angel of the Lord went out, and smote in the camp of the Assyrians an hundred fourscore and five thousand: and when they arose early in the morning, behold, they were all dead corpses", (II Kings 19:35). Thus, overnight, 185,000 fighting men died. It is interesting that very elaborate accounts of victories over the Judean cities were recorded, but there was no mention of Jerusalem. Ancient kings did not have their defeats written on clay tablets or stone.

Lord Byron was intrigued by this fascinating story from the Old Testament and gave us a colorful poetic description of the event:

The Assyrian came down like the wolf on the fold,
And his cohorts were gleaming in purple and gold;
And the sheen of their spears was like stars on the sea,
When the blue wave rolls nightly on deep Galilee.

Like the leaves of the forest when summer is green,
That host with their banners at sunset were seen:
Like the leaves of the forest when autumn hath blown,
That host on the morrow lay withered and strown.

For the Angel of Death spread his wings on the blast,
And breathed in the face of the foe as he passed;
And the eyes of the sleepers waxed deadly and chill,
And their hearts but once heaved, and forever grew still!

And there lay the steed with his nostril all wide,
But through it there rolled not the breath of his pride:
And the foam of his gasping lay white on the turf,
And cold as the spray of the rock beating surf.

And there lay the rider distorted and pale,
With the dew on his brow, and the rust on his mail;
And the tents were all silent, the banners alone,
The lances uplifted, the trumpet unblown.

And the widows of Ashur are loud in their wail,
And the idols are broke in the temple of Baal;
And the might of the Gentile, unsmote by the sword,
Hath melted like snow in the glance of the Lord!

The Destruction of Sennacherib.
From "Hebrew Melodies"
Lord Byron.

What could have been the etiological agent? Short suggests two possibilities, pneumonic plague and cholera. The pneumonic form of bubonic plague can certainly kill rapidly, but it would not be likely to move through an army in epidemic proportions if they were camped in the open with minimal close contact. Cholera, on the other hand is a "natural" for this situation. Ancient pagan armies had no concept of field sanitation. One or more cholera victims could have grossly contaminated a water supply by feces and vomitus. The water skins, and possibly also great casks, which were to supply water to fighting men in this hot semi-arid land were then filled from the contaminated source; thus a lethal does of Vibrio comma, the bacillus of cholera, was meted out to the entire army several days prior to the seige. The symptoms struck suddenly – marked vomiting and diarrhea with very rapid dehydration and death.

The Biblical account continues by stating that Sennacherib returned to Nineveh, his capital city, and that while in his chapel praying to his pagan god, one of his sons ran him through with a sword. Certainly the disaster at Jerusalem marked the beginning of the end for the Assyrian Empire. It rapidly declined and broke up, to be replaced by the Babylonians.

The events shown on the time-line covering the next two centuries are primarily to keep oriented. We can see that Hippocrates, "The Father of Medicine", lived on the Island of Cos at about the time of Nehemiah in Jerusalem.

During the succeeding several centuries, following the conquests of Alexander, the entire Middle East came under the influence of Greece, not just politically, but culturally and commercially. As a matter of fact, long after political power had passed from Greece to Rome, the language of culture and of commerce was Greek.

Let us return to the Bible and read a delightful passage from The Apocrypha written during this era, probably about 190 B. C.:

"Honour a physician with the honour due unto him for the uses which ye may have of him: for the Lord hath created him.

For of the most High cometh healing, and he shall receive honour of the king.

The skill of the physician shall lift up his head: and in the sight of great men he shall be in admiration.

The Lord hath created medicines out of the earth; and he that is wise will not abhor them.

Was not the water made sweet with wood, that the virtue thereof might be known?

And he hath given men skill, that he might be honoured in his marvellous works.

With such doth he heal (men,) and taketh away their pains.

Of such doth the apothecary make a confection; and of his works there is no end; and from him is peace over all the earth.

My son, in thy sickness be not negligent: but pray unto the Lord, and he will make thee whole.

Leave off from sin, and order thine hands aright, and cleanse thy heart from all wickedness.

Give a sweet savour, and a memorial of fine flour; and make a fat offering, as not being.

Then give place to the physician for the Lord hath created him; let him not go from thee, for thou hast need of him.

There is a time when in their hands there is good success.

For they shall also pray unto the Lord, that he would prosper that, which they give for ease and remedy to prolong life.

He that sinneth before his Maker, let him fall into the hand of the physician."

Ecclesiasticus, 38:1-15.

That last verse is disturbing, especially to a physician. Does it mean that to fall into the hands of a physician is a well-merited judgement on the sinner or does it mean that the punishement of his wrong-doing is tempered by the hope of medical relief? The Hebrew version, discovered in 1896, fortunately casts more light. It is translated thus: "He that sinneth against God will behave arrogantly before his physician."

Now we come to the time of Jesus – the New Testament era.

A more personal and intimate means of studying this era is to discuss what a well-trained physician of this period would have known and what techniques he would have had available. We fortunately have an ideal example – one who played a major part in writing the New Testament. The author of one of the Gospels and of the Book of Acts of the Apostles was the Greek physician Loukanós, whom we know today as St. Luke. There is little doubt about St. Luke's profession. St. Paul refers to him as "the beloved physician". We are not taking too much license to conjecture that he was well-trained. The style of his writing is that of an educated man. Where medical description is given, it is meticulously accurate. Luke uses a total of twenty-three Greek technical words found in Hippocrates, Galen and other medical writings of the period, but no where else in the New Testament.*

Remember, Greek influence had spread over the entire Middle East and with it the medical knowledge which had been formulated by Hippocrates and his followers. In addition, the Romans had developed a fairly high degree of skill in traumatic surgery, primarily due to the experiences of their military surgeons. The Middle East also was a cross roads for the exchange of knowledge from Syria and Persia, where many empirical medical skills had been known for centuries. Luke was able to draw on all of these sources of knowledge.

To enumerate only a few of several hundred diseases which the Hippocratic Corpus describes very accurately: signs, symptoms, treatment, prognosis, etc.:

The description of malaria is a classical one which is exactly the same as our medical text books give today except that we, of course, know that the cause is a micro-organism carried by the anopheles mosquite and not by "bad air". Tuberculosis is described in accurate detail. A very complete system for the setting of broken bones and the reduction of dislocated joints is almost indistinguishable from our treatment of these disorders today. Trephining of the skull for hemorrhage is described, even to the minute detail of advising keeping the trephine cool with water. We know to keep saline flowing over our trephine in neuro-surgical procedures today so that bone cells are not killed and healing is not delayed.

* An entire book with extensive study of Luke's medical terminology has been prepared by Hobart. However, many of the words which he discusses were possibly a part of the vocabulary of any educated man of that day and not used solely by physicians. It is felt by some scholars that his case is overdrawn.

The Hippocratic surgeons operated on the eye for cataract, though it was the procedure of couching, in which the opaque lens was pushed back into the vitreous by a needle rather than being removed through an incision as is done today.

Physicians in the Hippocratic tradition knew empirically the advantage of the use of wine or boiled water in surgical procedures and in dressing wounds, without, of course, having the remotest idea of micro-organisms and their role in producing infection.

These examples help to give us some glimpse of the knowledge and skill of St. Luke and his medical colleagues.

No discussion of medicine and the New Testament would be complete without considering a condition which has received a great deal of attention, and has evoked a great deal of controversy: St. Paul's "thorn in the flesh" (II Cor. 12:17). "A thorn in the flesh" has since become a proverbial expression, but for Paul it was obviously a literal bodily ailment. Most scholars consider the condition some type of chronic ailment which was painful, intermittently disabling, and apparently somewhat disfiguring.

Numerous diagnoses have been advanced over the centuries, including epilepsy, recurrent malaria, rheumatoid arthritis, etc. None of these can be considered very seriously when we attempt to make a diagnosis from the patient's own history. There is one condition which best fits the New Testament account when we listen to Paul's own words and analyze them with the help of modern medical science. We know that on the road to Damascus, Paul lost his sight. Later, in the city, his vision returned, but it is questionable whether he ever saw well again. Most of his letters were dictated and written by a companion, though at the end he would add a few words in his own hand. To the Galatians he wrote, "Look at these huge letters I am making in writing these words to you with my own hand" (Phillips translation of Gal. 6:11). He also wrote to the Christians at Galatia, "You know how handicapped I was by illness when I first preached the gospel to you. You did not shrink from me or let yourselves be revolted at the disease which was such a trial to you . . . I guarantee that in those days you would, if you could, *have plucked out your eyes* and given them to me (Phillips translation of Gal. 4:13-15). This, also, has become a figure of speech, but it may well have meant that his eyes were affected, and that he had to stop, unexpectedly, on his journey.

On one occasion, Paul spoke out strongly against a person who had ordered that he be struck in the mouth. It was necessary to tell him that it was the high priest who had given the order, implying that Paul was unable to see well enough to recognize a familiar figure at fairly close range (Acts 23:2-5).

A simple explanation of all these passages is that Paul had some disease of the eyes which intermittently flared up, was repulsive to look at, and interfered with his sight. Trachoma, a chronic and intractable form of keratitis and conjunctivitis exceedingly common in the Orient and Near East, would correspond exactly. This would cause marked irritation, pain and tearing. In addition, the cornea would become scarred, producing marked loss of sight.

You may have wondered why, in this discussion of diseases and medicine in the New Testament era that the miracles of Jesus were not discussed. Many attempts have been made by modernist scholars to explain the miracles in the light of modern medical science. The healing miracles are explained as psycho-somatic phenomena; raising the dead as the waking of persons from a cataleptic trance; the feeding of the five thousand as mass hypnosis, etc. Even attempts have been made to make the resurrection fit known physical laws; that is, that Jesus really wasn't dead but was in deep shock, and that after being placed in the tomb with the shroud wrapping His body, He revived and was alive for forty more days until finally infection from His deep wounds killed Him.

All of these explanations are made with the premise that Jesus was only a man and are, at best, transparent and very flimsy. The point is that the miracles are not the activity of a man, but, of God incarnate in human flesh. As such, they are miracles to us because they were performed by the One who ordained this particular system which we call the "laws of the Universe"

and who was and is in no way limited by that *created system.*

Therefore, I am convinced that the water at Cana was turned into the finest wine; that the lepers were healed and their rotting flesh made healthy *instantly;* and that He who did these things truly died on the Cross, came to life on the third day in a completely changed body, ascended, and lives today . . .

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Functional Islet Tumor Cured by Surgical Excision

Leslie B. Smith, M.D.
Lee B. Brown, M.D.
James W. Anderson, M.D.

This case report of functional islet cell tumor of the pancreas is of interest because of the unusually long duration of symptoms.

THE syndrome of hyperinsulinism is a well recognized clinical entity and its diagnosis and treatment are extensively documented in the literature[1, 2, 3, 4]. It is unusual that symptoms exist in excess of five years[5]. The following case is recorded because of the unusually long duration of symptoms.

Case History: L.B.S.: White male, age 48. The patient was admitted to the Good Samaritan Hospital on March 3, 1962, because of "passing out." His concern was an awareness of something different for a period of two days, the week prior to admission. He had worked harder than usual, including riding and aiding the cowboys in separating cattle. He noted some confusion and it seemed as if he were not getting his work done properly, particularly because of his inability to count cattle. He recalled awakening at 4 a.m. the next morning in a depressed and "semi-conscious state;" however he went back to sleep. His wife stated that on arising the following morning he was somewhat disoriented, irritable, aggressive, and hostile, all of which were definitely not his true nature. The symptoms cleared rather quickly after the eating of breakfast.

All of his life he had difficulties such as weakness, fainting, mild headaches, visual disturbances, uneasy shaky feelings, and rarely trouble thinking properly. These symptoms were prevented or relieved by the ingestion of nourishment. He regularly carried candy, raisins, or other foods, for in-between-meal consumption. The symptoms had been experienced more frequently, and with increased severity during the one and one-half years prior to his admission. Detailed questioning by three physicians failed to ilicit any other symptoms or significant events of the past. He specifically denied cold clammy sweats. He had gained twelve pounds in the past eighteen months. He had had a duodenal ulcer thirty years ago without any serious complications. His ulcer symptoms had regularly responded to medical treatment.

There were no abnormalities revealed by physical examination. His weight was 170 pounds. The blood pressure was 120/70, pulse

Phoenix, Arizona.

68 per minute. An abdominal examination was essentially within normal limits. No masses or viscera were palpable.

The laboratory studies are presented in Table I and Table II. Several urinalyses were normal. The blood cells and hemoglobin were normal, except for eosinophilia of six to eight percent. X-rays of the intestinal tract showed findings "suggesting an active duodenal ulcer." The skull X-rays were normal. Electroencephlogram was reported as showing: "Questionably abnormal EEG. Varied non-specific dysrhythmias and generally increased amplitude which could coincide with metabolic or toxic disorders. Focalization is not clear." The electrocardiogram was normal.

During his hospital stay, the lowest recorded blood sugar was 26 mgm.% during which time he was definitely symptomatic with "uneasy feeling and confusion." He was reported to be asymptomatic when the blood sugar was as low as 38 mgm.%

He was discharged from the hospital on March 8, 1962, to attend his daughter's wedding, and he was re-admitted on March 28, 1962. During this interval he had had several weak spells which were quickly relieved by eating.

A glucagon tolerance (10 mgm. glucagon per kilogram) was done before surgery (Table I) which demonstrated an ability to mobilize glycogen.

On March 10, 1962, laparotomy was performed. The pancreas was very carefully inspected in its entirety. A 1.5 cm. adenoma was present in the head at the junction of the head with the uncinate process. There was no evidence of extrapancreatic tumor, and the general abdominal exploration was within normal limits. There was no evidence of a duodenal ulcer. The adenoma was removed by direct excision; and then the pancreas was closed with interrupted sutures of silk. There was no evidence of ductal injury at the time of surgery. (L.B.B.)

The pathology report was: "This is a typical islet cell adenoma of the pancreas which is benign."

Frequent blood sugar determinations for thirty-six hours after surgery were high. (Table II) The blood sugar readings were within normal

TABLE I
PREOPERATIVE LABORATORY DETERMINATIONS

Fasting Blood Sugar

Date	Time	FBS mgm%
3- 5-62	7:30 a.m.	38
3- 7-62	8:00 a.m.	36
	11:00 a.m.	26
3- 8-62	7:00 a.m.	50
3-29-62	7:00 a.m.	38

Glucagan Tolerance (Oral)

Date	Time	Blood Sugar mgm/100 cc
3-29-62	8:00 a.m.	40
	8:30 a.m.	56
	8:30 a.m.	72
	8:45 a.m.	80
	9:00 a.m.	72
	9:40 a.m.	70

Glucose Tolerance (Oral)

Date	Time	Blood Sugar mgm%
3- 5-62	7:30 a.m.	38
	8:00 a.m.	75
	9:00 a.m.	142
	10:00 a.m.	235
	11:00 a.m.	246

Miscellaneous Laboratory Data

Sedimentation rate 10.5 mm/hour, VDRL negative, Bilirubin 0.1 mgm. % in 1 minute and 0.6 mgm. % in 30 minutes, alkaline phosphatase 1.4 units, SGOT 13 units, SGPT 16 units, LAP 95 units, serum amylase 95 units, serum calcium 8.8 mgm. %, serum phosphorus 4.5 mgm. %.
Ketogenic steroids 10 mgm./24 hours,
17-ketosteroids 2.1 mg./24 hours,
tri-iodothyroxine uptake 19.7%.

TABLE II
POSTOPERATIVE LABORATORY DETERMINATIONS

Blood Sugar

Date	Time	Blood Sugar mgm.%
3-30-62	10:23 a.m. to 12:30 p.m. — surgery	
	1:00 p.m.	280
	4:00 p.m.	280
	6:30 p.m.	322
	9:30 p.m.	293
3-31-62	12:30 a.m.	285
	3:30 a.m.	266
	6:30 a.m.	242
4- 1-62	8:00 a.m.	106
4- 2-62	7:00 a.m.	112
4-24-62	8:00 a.m.	112
4-26-62	11:00 a.m.	106

Glucagan Tolerance (Oral)

Date	Time	Blood Sugar mgm.%
4- 5-62	8:00 a.m.	96
	8:10 a.m.	108
	8:20 a.m.	130
	8:30 a.m.	120
	8:45 a.m.	118
	9:00 a.m.	112
	9:45 a.m.	96

limits forty hours after surgery and remained so thereafter. Serum acetone levels were normal.

During the post-operative course he had frequent bouts of abdominal cramping pain requiring narcotics for relief, and low-grade fever. For the first three post-operative days he received Ilopan 2 cc. intramuscularly every six hours. He had a moderate amout of serous drainage which was non-irritating to the skin. A pancreatic fistula was suspected at one point. The drainage ceased, however, and the Penrose drains were slowly removed. He was doing satisfactorily at the time of his discharge on April 6, 1962.

He was re-admitted to the hospital April 23, 1962 after the development of purulent drainage from his previous drainage tract associated with fever and upper abdominal pain.

Examination at this time revealed the presence of fullness in the left upper abdomen with associated tenderness.

Surgical exploration was carried out on April 24, 1962, which confirmed the presence of a lesser sac abscess. One hundred cc. of purulent material was removed from the lesser sac. Enterococci were cultured from the pus which were sensitive to all the frequently used antibiotics. He was given 600,000 units of procaine penicillin every twelve hours and chloromycetin 500 mgm. every six hours.

His post-operative course was without difficulty. He was discharged from the hospital May 1, 1962.

Subsequent to this time he was seen on many occasions as an out-patient. He continued to have drainage which waxed and waned on many occasions. On several occasions he developed upper abdominal fullness at which time one could palpate a distinct mass in the epigastrium. This would disappear with the spontaneous and profuse drainage of serous fluid. He remained well during this entire time. Sinagrams were done on several occasions which demonstrated a 3 cm. pocket high in the lesser sac. His difficulties gradually became less frequent, and he would often go for several weeks with no drainage and no difficulty.

Subsequent to April, 1963 he has seen his referring physician (J. W. A.) on many occasions. His drainage has ceased entirely and he has been well for more than two years. At no time has he had any recurrence of symptoms indicating hyperinsulinism. Blood sugar determinations in the long post-operative period were within normal limits.

Discussion. This is a typical case of hyperinsulinism and hypoglycemia of many years duration. Historically one would assume that he had had episodes of hypoglycemia throughout his adult life. Crain and Thorn[5] reported a collected series of 193 cases, and 48 or 25% had symptoms in excess of five years. Only three patients (1.5%) had symptoms in excess of 15 years.

Seale Harris was the first to clearly describe hyperinsulinism and dysinsulinism in 1924[6], which was only two years after Banting and Best reported their discovery of insulin[7]. Wilder, et al[8] reported a case of severe hypoglycemia due to an islet cell carcinoma. This report clearly established the relationship between islet cell tumors and the clinical syndrome of hyperinsulinism. Howland, et al[10] were the first to report the preoperative diagnosis of islet cell adenoma of the pancreas with cure by surgical removal of the adenoma. The operative procedure was performed by Roscoe Graham. Of the many published reports of hyperinsulinism and islet cell adenomas of the pancreas, few surpass the excellent discussion by Harris[10]. One of the authors (L. B. S.) reported the seventeenth case of hyperinsulinism cured by removal of an adenoma of the pancreas[11].

The existence of hypoglycemic symptoms relieved promptly by the ingestion of nutrients, and fasting blood sugar levels of 26-40 mgm% comply with Whipple's triad for establishing the diagnosis of functioning islet cell adenoma of the pancreas[1]. Because hypoglycemia has multiple etiologies, further studies were conducted as outlined in the case report.

The glucose tolerance, except for the low fasting level, was typical of a patient with diabetes mellitus (blood sugar 246 mgm% at the end of three hours). This is in support of the thesis that the glucose tolerance test is of little or no value in making a diagnosis of organic hyperinsulinism. The glucagon tolerance test showed that glucose could be mobilized from glycogen storage.

Clinical, laboratory, and X-ray studies did not show any abnormality of the pituitary, adrenal, or thyroid glands. The liver function was not impaired. The electroencephlogram, although not diagnostic, was suggestive of cortical dysfunction. The single most valuable laboratory study was the repeated demonstration of low

fasting blood sugars.

Although approximately 75% of adenomas of the pancreas, either single or multiple, are found in the body and tail of the pancreas, a significant percentage are found in the head, as was true in the case reported. Approximately 10 percent of the tumors are malignant, 10 percent are multiple, and as high as 3 percent may be extra-pancreatic in location[2, 3, 4]. The operative problem may be a more formidable one than illustrated by this case. The location of the tumor in the head of the pancreas which cannot be excised without injury to the pancreatic duct or ampullary structures may require a Whipple procedure. The failure to identify the tumor or multiple tumors in the pancreas may require subtotal or total pancreatectomy.

The development of pancreatic fistulas and lesser sac abscesses are well recognized complications of any pancreatic surgery, even when the procedure seems so insignificant. It is probable that a small pancreatic duct was injured in the course of this procedure which accounted for the prolonged evidence of pancreatic fistula and lesser sac pseudocyst. As is true of most instances of well established pancreatic fistulae following procedures similar to that described, eventual healing is the rule.

Summary. A case of islet cell adenoma with hyperinsulinism is reported in a 48-year-old man. His symptoms are believed to have existed in a mild form most of his adult life. The diagnostic aspects of his case and the surgical cure of hyperinsulinism by excision of the adenoma are reported.

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DANGER — BATHTUB AHEAD

Ill-advised statements and actions since the thalidomide phenomenon, aided by the unbalanced perspective given these statements in the lay press, have contributed to the public's apprehension — approaching hysteria — concerning the side effects of drugs. To the extent that this concern admonishes greater caution and alertness in the use of drugs, some good may be salvaged from the thalidomide tragedy. But to the extent that it deprives patients of useful new drugs or frightens a physician into withholding needed therapy from his patients, it is regrettable. We must not forget that there is no progress without risk, whether it be in the field of electricity, the motor car, the airplane, atomic energy, space exploration, or drugs. Even a bathtub can be perilous, as astronaut John Glenn discovered. Theodore G. Klumpp, M.D., in *Massachusetts Physician*, (28:207-208), June-July 1965.

Status Epilepticus



Philip T. White, M.D.

Status epilepticus constitutes a grave but, fortunately, infrequent complication of convulsive disorders. Although recognizing the urgency of proper treatment, many physicians seem unsure as to the proper management. In this lucid article, Doctor White reviews past and current concepts of this state and outlines the proper treatment.

INTRODUCTION

OUR concern for the social, educational, recreational and occupational problems of people with epilepsy in modern days has tended to emphasize the role of the psychologist, the social worker, the vocational counselor and others. The role of the physician should not be minimized as proper medical control is essential to the attack upon associated problems. Conversely, improper medical management can lead to the tragic occurrence of status epilepticus. Status epilepticus should always be regarded as a true medical emergency and a sign that ominous structural lesions may exist in the patient. It should be recognized that the mortality and morbidity attending status are high. It should not be regarded as simply a part of the natural history of epilepsy, but rather as having significance in relationship to underlying cause.

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There are varying definitions of what constitutes status epilepticus. To some it is a condition wherein a seizure continues constantly without cessation. Others consider it a series of epileptic seizures without recovery of consciousness between attacks. An older definition says in part, "he has not, therefore, got over the disturbances caused by the first attack before his second occurs, then a third, a fourth, a fifth, and in proportion to the recurrence of the fits the cerebral congestion increases, the apoplectic coma is prolonged and extends over a period varying 2-24 hours, and after a time the patient does not recover his senses at all."[1]

The term is often used in a looser sense being applied to the condition of petit mal and to epilepsia partialis continua. There is no doubt that such types of seizures can occur without cessation, but in epilepsia partialis continua consciousness is not always lost, although it may be impaired, and the status of petit mal varies considerably from one case to another with obvious

impairment of awareness and responsiveness but without prolonged unconsciousness. At times status may be equated with a single prolonged convulsion or with serial seizures. A definition of status epilepticus in precise terms of duration, character and terminating events, is difficult to achieve. For example, does a series of three recurring seizures without recovery of consciousness constitute status? How long must activity continue before it becomes status? If the activity terminates spontaneously is it status? Perhaps status is the elephant of epilepsy; it can be recognized but not described.

A composite definition derived from those in the literature might be as follows: Status epilepticus consists of continuous or recurrent partial or generalized convulsive activity, accompanied by persistent loss of consciousness, and an alteration of vital functions. Further factors to consider would include a departure from the usual seizure pattern of the patient, and a pattern of recurrence indicating an improbable spontaneous cessation.

The historical background of status epilepticus is of some interest. This was thoroughly reviewed by Hunter in 1960.[2] As he points out, this condition does have striking clinical features and is not easily overlooked. In spite of this, accounts of status epilepticus were infrequent prior to the advent of bromide therapy for epilepsy. In addition, only a few of the very early writers seemed to have recognized the significance of the condition. Hunter does review some of the accounts of this condition appearing in early medical writings. In 1761, for instance, Morgagni described a patient 18-years of age who apparently died after continuous seizures of 7 days duration. Sydenham, in 1689, wrote of one fit coming on as fast as the other was gone, particularly in children. James, in 1743, recognized the danger of fits ". . . when they afflict the patient without intermission." Hunter records that the first article in the periodical literature occurred in 1858 incorporated in a report about institutionalized epileptics. Apparently the term status epilepticus was originally used about 1868 in a translation of Trousseau's lectures on clinical medicine. Following this, articles began appearing with greater frequency. More modern authors, while emphasizing pathology and treatment, have continued this trend so that by now there are somewhere between 400-500 dissertations on the various aspects of status epilepticus. A factor which may have provoked a greater number of reports about status epilepticus was the creation of so-called county lunatic asylums, mental deficiency hospitals, and epileptic colonies in the early 19th Century in England. Under these circumstances there was more opportunity for long-term, direct and continuous observation of the more severely afflicted epileptics, those which could be expected to have the more severe forms of symptomatic seizures. Thus, the asylum physicians had under observation the severe cases, whereas general physicians and neurologists saw only the milder forms as out-patients.

CAUSES

Hunter feels that his review of the history of status suggests that the treatment of epilepsy itself can at times be a cause for status epilepticus.[2] It is true that following Locock's discussion in 1857 of his use of bromides in hystero-epilepsy, and Wilke's report of a series of epileptic patients treated with bromides in 1861, there appeared to be an upsurge of reports on status epilepticus and soon thereafter a recognition that withdrawal of medication had serious consequences. At first bromides were thought to effect a cure for epilepsy, but it soon became obvious that this was not so. Physicians including Hughlings Jackson began warning that any abandonment of treatment had to be done in a gradual manner. A clear connection between sudden withdrawal of medication and the occurrence of status was not clearly recognized, however, until the early 20th Century.

When barbituates were introduced in 1912 by Hauptmann, they, too, were considered a cure for epilepsy. This misconception led to withdrawal of treatment and a subsequent recognition that status epilepticus could be precipitated. The similar pattern of events with bromides and phenobarbital was convincing evidence. Further, it was soon noted that even non-epileptics were liable to seizures upon sud-

den withdrawal from bromides or barbituates. We now know that status can be precipitated by the sudden cessation of a variety of anticonvulsants, particularly those used for control of major seizures. The sudden withdrawal of other compounds such as alcohol and meprobamate may result in status epilepticus.[3]

Another interesting clue as to the cause of status epilepticus can be developed from the historical review. Prior to the advent of the more specific therapies, physicians had often observed that infectious diseases seemed to have a beneficial effect upon the frequency and severity of seizures. After the advent of bromides and other specific therapies, observations of an opposite effect were frequently made. Thus, it has been postulated that systemic illnesses impair the absorption, metabolism or utilization of anticonvulsants, in a sense leading to an internal withdrawal of medication, thereby contributing to the occurrence of status epilepticus. A review of the case records of patients with status epilepticus at the National Hospital of Queen's Square revealed that in 23% precipitation was related to a change in medication, 30% to intercurrent infections, and in the others no specific etiologic relationship could be established other than that the patients had rather pronounced gross brain disease. In a review of another series of cases in a mental deficiency colony, it was found that 38% of status epilepticus was precipitated by infection.[2]

A variety of other causes of status epilepticus have been described from time to time in the literature. These include electroshock, multiple sclerosis, septicemia, alcohol, a host of drugs including some of the tranquilizers, cerebrovascular disease, encephalitis, and a variety of structural lesions of the brain. Even drugs which seem to have little relationship to the nervous system can at times provoke status epilepticus. An interesting report in 1965 by Rizzuto and others describes a 49-year-old man in status epilepticus after ingestion of 95 tablets of probenecid (Benemid).[4] The normal amount of this uricosuric agent is from 2-4 tablets per day.

Others, including Janz, feel that the occurrence of status, regardless of its apparent precipitating cause, has significance in relationship to structural lesions of the brain, including tumor and trauma.[5, 6] Status should not be considered just a part of the natural history of epilepsy, but always as a significant sign of a possible ominous structural lesion. That there was a relationship between the degree of brain involvement and the occurrence of status was recognized by some of the early writers, particularly those associated with the asylums for the care of epileptics. As Janz points out, the occurrence of status epilepticus is four to five times more frequent in patients with symptomatic seizures than in those with idiopathic epilepsy. He proposes that in a vast majority of patients with status epilepticus there is a structural lesion, usually frontal, usually involving white matter, and usually associated with some degree of cerebral edema. Superimposed upon this there may be precipitating factors of intercurrent illness, drug withdrawal, excessive fluids, fatigue, diagnostic procedures or other drugs which precipitate the status epilepticus. Of 1,885 patients with idiopathic epilepsy, 30 or 1.6% developed status; of 730 patients with symptomatic epilepsy, 65 or 9% did so. Of this total of 95 patients, 24% were post-traumatic, 25% associated with a neoplasm, 19% had other structural lesions and 32% had idiopathic epilepsy. The majority of the localizable lesions were in the frontal areas.

Neurologists have long observed a relationship between isolated bouts of status or its occurrence as an initial or early event in the development of symptoms, and localized structural cerebral lesions. In general, when status epilepticus occurs in association with idiopathic epilepsy, it does so late in the course of the illness.

INCIDENCE

Status epilepticus does occur frequently enough to deserve some consideration. The estimates of its incidence vary. In 1907 Alden Turner studied 280 patients for a period of 2-10 years.[7] Of these 5% developed status at one time or another. Hunter, in his review of the population at Queen's Square, estimated an incidence

of 1.3%.[2] Lennox has related that it occurs in 10%.[8] Janz indicates an incidence of around 3.7%.[5] If we accept the lowest figure, we would still be confronted with several thousand bouts of status epilepticus in this country each year. Further, it should be noted that there is a considerable mortality associated with status epilepticus. Even with modern therapy it is probable that a least 10% of the patients die. Whitty and Taylor record a mortality of 41%.[9] A direct relationship of duration to outcome is reported by them. Of 6 patients in status for less than 3 hours, none died; of 12 with a duration of 3-12 hours, 4 or 33% died; of 3 with a duration of 12-24 hours, 1 or 33% died; and of 6 in status for more than 24 hours, 100% died. Figures from earlier authors indicate a mortality ranging between 33-50%.[2] Thus, it does represent a true medical emergency.

Data in reference to morbidity following status epilepticus are a little more difficult to evaluate. Some authors imply that all patients with status will have measurable after-effects. Presumably the sequelae of status are in direct proportion not only to the underlying cause but to the duration of the status itself. From the pathological reports in the literature it is apparent that changes do occur in the cellular elements of the brain. Fowler, in 1957, reported the findings in four previously healthy children, all of whom died after being in status from 1-6 hours. All showed extensive neuronal necrosis involving the cortex, basal ganglion and some areas of the cerebellum.[10] Small and Wolf reported the findings in a 13-year-old boy with status epilepticus following what was apparently a trivial head injury.[11] The changes were most severe in the frontal and temporal regions. Meyer and his colleagues report similar changes in a 9-year-old boy with three episodes of status.[12] Softening, necrosis and neuronal loss are the common findings. These authors mention such changes may result from anoxia, but also invoke the concept that there may be specific brain demands that occur during the course of seizures, and that there is not only generalized anoxia but specific anoxia as well. Thus, it is not difficult to imagine that permanent sequelae could result from prolonged status epilepticus. Marked alterations in vital functions do occur in association with seizures, even in the absence of the muscular components.[13] Blood pressure rises, heart rate increases, glucose is mobilized, and cerebral spinal fluid pressure rises precipitously. There is a marked increase in cerebral blood flow to at least twice the normal value and it may well be that these emergency measures by the body are not sufficient to keep up with the demands of the brain. Certainly, it is well recognized that intellectual, emotional and physical sequelae of a permanent nature can be associated with status epilepticus.

Other less usual sequelae have been noted. Diamond and Aquino describe a case of unilateral status epilepticus ending in death in which there were demonstrable changes in the muscles consisting of irregularity or loss of cross striations, vacuolization of fibers, and a clumping and dissolution of the sarcoplasm associated with myoglobulinuria.[14] Study of the uninvolved side revealed normal musculature. Thus, while it is difficult to estimate the extent and nature of sequelae, it is obvious that morbidity factors cannot be overlooked, again emphasizing that status epilepticus is a true medical emergency.

TREATMENT

Because of the outcome of status epilepticus, much attention has been devoted to its adequate treatment. Even in these modern times proper treatment seems elusive and much individual bias appears to persist as to how treatment should be undertaken.. Some of the methods advocated in the past include warm baths, or alternate warm and cold baths (seemingly invoking the danger of aspiration), sudden dilatation of the anus, intravenous 50% sucrose, lumbar punctures, pneumoencephalograms, the inhalation of 5% carbon dioxide and 95% oxygen, ether, chloroform, morphine, and probably, incantations, dances, charms and magic spells.

Following the recognition that the withdrawal of bromides had some role to play in the production of status, it was revealed that reinstituting large doses of bromides was helpful. Shortly after the advent of the use of barbituates it was recognized that intramuscular and

intravenous phenobarbital was a very valuable drug in the control of status epilepticus. To this day it may well be the most commonly used drug in the control of status. No uniform method for its use has ever been devised. The rate and dosage of administration must be highly individualized. Most agree that is is probably the most effective of the barbituates, although others tout the usefulness of amobarbital (Amytal), secobarbital (Seconal) and thiopental (Pentothal). However, these latter drugs have a sedative effect that is out of proportion to their anticonvulsant effect. Continuous intravenous phenobarbital, along with an adequate airway—a tracheostomy if necessary — is a traditional way of trying to deal with this condition. Further, patients under these conditions may have to be given extraordinary quantities of phenobarbital ranging from 1.5 to 3 grams. Under these circumstances a patent airway is essential, making mechanical respiratory assistance feasible when needed. There is some disagreement as to whether or not supplemental oxygen should be given. Some experimental evidence suggests that excessive quantities of oxygen may contribute to the sustained propagation of seizures, particularly in the absence of an adequate buildup of carbon dioxide.[13]

Another drug that has many advocates is paraldehyde. Whitty and Taylor claim paraldehyde is the treatment of choice and advocate initial doses of 8-10 ml. intramuscularly, followed by 5 ml. every 30 minutes if seizures continue.[9] In some cases they advocate continuous intravenous drip. In infants, doses of 1-2 ml. were advocated, and for children 6 months or older, 2-3 ml. However, their figures are not convincing. Most of the patients received a combination of drugs and where comparisons were possible between phenobarbital-treated and paraldehyde-treated patients, there appeared to be no significant difference in the duration after treatment. They did indicate that if phenobarbital was used, initial doses should vary between 350-750 mg. It is interesting to note that one of the patients classed as a poor response to phenobarbital received only 7½ mg. every 8 hours. One could anticipate this would be ineffective.

Local anesthetics have been used fairly successfully by some in the control of status epilepticus. In 1955 Bernard and others stated that 9 cases of serial or status epilepticus responded well to lidocaine in doses of 2 mg. per kilogram per hour by intravenous drip.[15] The more severe cases would at times require as much as 6 mg. per kilogram per hour. In addition to the favorable results, they point out that this drug has very few toxic effects and that as much as 750 mg. per hour has been given during the course of anesthesia without toxic side effects. Support for their studies was subsequently forthcoming from Tavener and Baine in 1958 in a controlled study demonstrating that intravenous lidocaine was superior to intravenous saline.[16] In patients who were having serial seizures, they gave either intravenous saline or lidocaine at levels of 200 or 400 mg. at a rate of 100 mg. per minute. This produced an interval between seizures significantly longer than that produced by saline. Further, a direct dose-duration relationship existed.

Soon after the introduction of intravenous diphenylhydantoin (Dilantin), reports began appearing that this was valuable in the control of status epilepticus. Carter claimed that 97 attacks in 85 patients were stopped with this drug alone when given at the rate of 50 mg. per minute to a total of 250 mg. intravenously.[17] However, this is a somewhat confused report for in one part he states that he studied 71 attacks in 42 patients, but in another list allegedly shows the results of 121 attacks in 85 patients. At least he stated clearly that he noted no side effects. In 1958 McWilliam, in England, stated that in 10 of 11 children ranging in age from 6 days to 11 years, anywhere from 25 to 500 mg. of intravenous diphenylhydantoin stopped the seizures within ten minutes.[18] However, it is to be noted that some of his cases had had previous spontaneous cessation of seizures, and in at least one case it appears that the seizures stopped so promptly that there would hardly have been sufficient time for usual arm to brain circulation. Neither of these authors commented upon the possible side effects of intravenous diphenylhydantoin and particularly its inadvertent intra-arterial injection which is known to cause severe necrosis and ultimate amputation of the part.

A few reports have appeared advocating the

use of muscle relaxants such as curare or succinyl choline for the control of status epilepticus. In one case reported by Evanson in 1959, a 9-year-old boy did not respond to the usual barbituate-paralydehyde medication.[19] He was put on suxamethonium at a rate of 50 mg. every 15-20 minutes along with an endotracheal tube. At the end of 8 hours seizures continued whenever the level of drug was lightened and he ultimately was placed on diphenyldantoin in addition. The status persisted for approximately 12-18 hours and was followed by six weeks of recovery of function. Whitty and James indicate that this may be of some value in addition to the use of paraldehyde, and that the EEG should be used as a monitor since there are no peripheral clues to the level of seizure activity.[20]

One group of authors advocated the use of acetazolamide (Diamox) but from their report it is doubtful that they were dealing with true status epilepticus and it is even less certain how many were really helped by this preparation.[21]

It has been advocated by Carter that intravenous urea may be helpful.[22] He reports 57 attacks in 57 patients in which this treatment was started within 5 minutes after the onset of status. One would have to question whether this was really status epilepticus. In any event, he reports that Urivert given at the rate of 1.5 grams per kilogram intravenously over 45-90 minutes, stopped the seizures in all within 3-10 minutes. In 3 instances repeated dosages were necessary upon the subsequent recurrence of seizures at 4, 12 and 18 hours later.

Hunter and Waterfall report myanesin as being helpful in 3 cases within as little as 30 seconds.[23] Their dosages ranged between 7-8 ml. per kilogram and no side effects were noted but the effect was evanescent and the seizures returned.

In 1963, Bladin, in the course of treating complications of arteriography, noted that intracarotid amobarbital appeared unusually effective.[24] He subsequently studied its use in 22 adult patients with a variety of uncontrollable seizures. Thirteen had predominantly unilateral seizures as a consequence of head injury, tumors or cerebrovascular disease, and in 12 this procedure terminated the seizure activity. Three patients had generalized seizures beginning unilaterally, and all 3 responded. Six had inconstant and changing seizures varying from one side to the other, and although the intracarotid amobarbital seemed helpful in stopping the seizures, 4 of the 6 died. It is interesting to note that all of the patients had a Todd's paralysis of variable duration afterwards, but none showed any severe respiratory depression. He used between 150 and 450 mg. in single, or if necessary, repeated injections. Adjunctive intravenous diphenlyhydantoin was used following cessation of seizures. He felt that the effect of intracarotid amobarbital also gave some clue as to the localization of seizure activity. The prompt response to unilateral injection suggests that even switching seizures, or alternating hemilateral seizures, were really secondary to focal cortical irritation rather than subcortical in origin as suggested by Gastaut.

More recently, diazepam (Valium) has been shown to be effective. Naquet and others first reported on this in 1965 indicating that intravenous or intramuscular diazepam was affective in 6 cases, 4 of which were of the petit mal variety, 1 hemiclonic and 1 generalized.[25] Amounts used ranged from 10 mg. in children to 10-20 mg. in adults. A more recent report by Gastaut and others was also encouraging.[26] They used intravenous or intramuscular diazepam in increments of 10 mg. to as much as 70 mg. over a period of 3-4 hours. One episode of respiratory insufficiency occurred in a 9-month-old infant given a total of 6 mg. They indicate that in some instances it may be desirable to use a continuous intravenous drip of the preparation. In 15 bouts of generalized status, 12 were relieved completely, 3 were failures; in 6 presumed petit mal patients there was immediate, prompt relief in all 6; and in predominantly unilateral seizures 3 were successfully controlled. However, they warned that in cases with severe brain damage or "catastrophies" such as may occur with emboli and other vascular disease, the effect was only transient and other methods might be indicated.

Hattaway and White, in a controlled comparison of phenobarbital and chlordiazepoxide

(Librium), found the latter of great value.[27] The usual dose of chlordiazepoxide was 100 mg. intravenously, with occasional resistant cases requiring 200 mg. In 16 of 17 patients status was terminated abruptly in less than 5-10 minutes. Simultaneous electroencephalgraphic tracings continued to be abnormal for a brief period even though clinical manifestations stopped. One 5-year-old girl was given 200 mg. and remained drowsy for 24 hours. No problems with respiratory depression were encountered. They comment that in all patients normally on diphenylhydantoin, there was a blood level of less than therapeutic value at the time of initiation of treatment for status. An additional observation suggests that this drug did not terminate a prolonged hysterical episode, simulating status.

It is apparent that many agents have been used to treat status epilepticus. Until recently all had notable side effects, were difficult to administer, were of evanescent value only, or failed in a significant percentage. Early reports are generally too enthusiastic but it appears that chlordiazepoxide or diazepam may be the current treatment of choice.

SUMMARY

Status epilepticus has been noted throughout much of medical history but its significance was not recognized nor was it frequently reported until the early or mid-19th Century, coinciding with the housing of epileptics in colonies and/or the discovery of the usefulness of bromides. Abrupt withdrawal of medication can precipitate status epilepticus, and superimposed systemic infections in a sense may produce an internal withdrawal of medication which can also provoke status epilepticus. Recognition has been given to the importance of underlying structural lesions of the brain as being frequently related to status epilepticus, particularly where it occurs as an isolated phenomenon or early in the course of the illness. It is probably not just a part of the natural history of epilepsy that has to be anticipated by everybody. Status does occur with a frequency sufficient to make it worthy of our attention, with estimates of incidence ranging from 1.3-10% of the epileptic population. It has a mortality and associated morbidity that dictates it must be approached as a true medical emergency. Over the years a number of methods of treatment have been advocated, all of which seem to have a certain percentage of failures and complications. In this past year the intravenous use of diazepam and chlordiazepoxide seems to offer promise for more successful control. The adjunctive use of phenobarbital and other anticonvulsants should not be overlooked.

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Cancer of the Thyroid Gland



Howard Mahorner, M.D.

An excellent review of the treatment of thyroid carcinoma is presented in an interesting paper pointing out the peculiarities and relatively favorable aspects of this disease.

WHEN cancer is listed according to its anatomic location in the body, the relative incidence of involvement of the thyroid gland is eight, far behind carcinoma of the colon and rectum and the breast and lungs. Yet there will be about seven thousand five hundred new cases of cancer of the thyroid gland in the United States in 1965.

The surgical significance of lesions of the thyroid gland has changed tremendously in the last twenty-five years. The year 1943 saw the advent of antithyroid drugs which suppressed toxicity. Initially thought to be a complete therapy, reality soon proved it an adjunct to surgery for hyperthyroidism. About the same period Iodine-131 made its clinical appearance and this truly became an alternate method for treating hyperthyroidism in adult age. In addition to these factors the preventive measures were actively reducing the number of cases of large nodular goiter and the percentage of patients with thyrotoxicosis, particularly of the secondary type. This reduced the volume of surgery, and surgeons conscientiously have tried to prevent the indications for thyroidectomy from slipping out of their sphere. Studies continued which showed that nodular goiters, particularly single adenomas, were associated in a high incidence of cases with carcinoma of the thyroid gland. This brought about the very difficult problem of deciding for the patient whether single nodules should be removed in every instance or whether they should be tolerated with the idea they probably are not malignant. Even in a nonendemic area such as New Orleans malignancy does occur in the thyroid gland in about five percent of those in which the operation is done for nodular goiter and in about ten percent when it is done for single adenomas. Similar statistics show even a higher incidence of cancer in the endemic goiter regions. Indications for operations based on statistics undoubtedly tend to promite unnecessary operations, for benign nod-

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ularity, or Hashimoto's disease, or non-specific thyroiditis, which might subside if the surgeon or internist were more certain the thyroid lesion under question was really benign.

Cancer of the thyroid gland has its own peculiarities. About two-thirds of the cases are the papillary type, another ten percent are follicular carcinomas and almost all the rest a mixed variety, with ten percent being undifferentiated tumors. The majority of thyroid cancers grow slowly but they do metastasize regionally and distally and ultimately then can kill the patient unless they are eradicated completely. The undifferentiated carcinomas and giant cell carcinomas have almost one hundred percent mortality within a period of two years, and such lesions as sarcoma and some of the Huertle cell tumors form the rest of the malignant group.

In nine hundred and forty-nine thyroidectomies on our personal service carcinoma was encountered in thirty-seven patients, an incidence of 3.9%. The following table shows some interesting features of this group of cases.

TABLE I

THYROID
949 Operations

Non-toxic diffuse	3	
Toxic diffuse	204	10 thyroiditis
Non-toxic nodular	552 (35 carcinoma)	19 thyroiditis
Toxic nodular	119 (2 carcinoma)	6 thyroiditis
Substernal	61	
Recurrent	42	

THYROID
949 Operations

MALIGNANCY—37 (no deaths)		5 thyroiditis
Papillary	21	
Follicular	8	
Undifferentiated	7 (1 anaplastic)	
Squamous cell	1	

THYROID
949 Operations

THYROIDITIS — 111		5 malignancy
Non-specific	46	3
Hashimoto's	57	2
Riedel's Struma	8	

CARCINOMA OF THYROID
Follow up
37 Patients

			Living and Well
Less than 1 year			6
1 to 5 years			10
5 to 10 years			11
10 to 14 years			8
Age 69	Death in 3 mos.	Anaplastic ca.	
Age 46	Death in 3 years	Undifferentiated ca.	
Age 52	Death in 3 years	Papillary ca.	
Age 52	Death in 7 years	Follicular ca.	

Lost to Follow up 2

CARCINOMA OF THYROID
IN CHILDREN
Operation

Child 14 years	1953	Still well
Child 6 years	1957	Still well
Child 4½ years	1957	Still well
Child 10 years	1964	Still well

With respect to thyroiditis, one hundred and elevent patients had this pathology and in this group there were five malignancies, three occurring in the firty-six cases of non-specific thyroiditis and two occurring in fifty-seven cases of Hashimoto's disease, which is very common on the Gulf Coast. This does not show an abnormally high ratio of malignancy in the patient with Hashimoto's disease, as has been reported in some series.

We have made a follow-up study of these thirty-seven patients with carcinoma. There were no surgical deaths. Three of the patients died within three years; one, age 69, of anaplastic carcinoma in three months; one, age 52, of papillary carcinoma; one, age 46, of undifferentiated careinoma in three years; and one, age 52, of follicular carcinoma in seven years. All of the remainder survived with no obvious disease. This includes four cases of carcinoma occurring in children below the age of fourteen years, surviving eleven, seven, seven and one year following operation.

With regard to the extent of surgery, we adhere to a middle ground, neither extremely radical nor extremely conservative. We regard all papillary or follicular carcinoma involving regional nodes as having a primary in the thyroid gland. When the disease seems to be unilateral and it has not metestasized; that is, when a single nodule in the thyroid gland has been totally removed by lobectomy and removal of the isthmus, and when regional node samples show no evidence of extension, this is regarded as sufficiently radical. We do neither a block dissection nor total thyroidectomy, that is, the opposite lobe is not removed in such instances. However, if regional nodes are involved we convert the operation into a block dissection, leaving the opposite lobe as long as the isthmus has not shown involvement.

In some hospitals which are devoting their efforts entirely to malignancy it has been found that the incidence of bilateral involvement in the patient with cancer of the thyroid gland is as high as eighty percent.[1] This is not our experience, nor do I believe it can be borne out in a general hospital. The aberrations or variations in the comparison of statistics between the cancer hospital and the general hospital bear some critical analysis. Over fifty percent of the cancer hospital cases had been operated upon

previously which would tend to raise the percentage of bilateral lobular involvement. Moreover, the remaining fifty percent undoubtedly had a high incidence of obvious carcinoma since they went directly to a cancer hospital.

The outlook for the patient with papillary and follicular carcinoma is good. Even though one of the children, age 6, had bilateral lymph node metastases, bilateral block dissection has resulted in control of the disease or cure now for a period of seven years. Two other children, aged six and fourteen years, are well seven and eleven years after unilateral block dissection. One patient had resection of malignancy around the subclavian vessels in an attempt to remove completely this extension, and now twelve years later there is no evidence of the disease.

Iodine-131 as an adjunct therapy in cancer is of value. This has been proved best by the statistical study from the University of Michigan.[2] Two hundred patients with thyroid carcinomas were treated at the University of Michigan over a fourteen-year period. Concentration of Iodine-131 was demonstrable in metastases in eighty-two patients. Fifty-two of these had regional lymph mode metastases and thirty-five of the fifty-two were apparently free of their thyroid carcinoma. In thirty of the eighty-two the metastases were at distant structures and sixteen of the thirty showed complete regression. This indicates that Iodine-131 can be of value in treating metastastic thyroid carcinoma.

An additional helpful measure in disseminated carcinoma of the thyroid gland may be the hormone dependency of the growth. This exists in a small percentage of patients who have shown metastases. Under these circumstances the growth of the cancer seems to be dependent on thyroid stimulating hormone (TSH) and this may be suppressed with excessive doses of thyroid extract. Even roentgenographic evidence of dissemination of cancer to the lymphatics of the lung has shown regression and complete clearing after treatment with thyroid extract. On the other hand, hormone therapy must not be used as a substitute for surgery. It is essential to do all one can to eradicate the disease surgically. It is extremely important to remove the primary growth, even though the metastases cannot be completely encompassed and removed.

Direct irradiation for thyroid carcinoma of the neck after removal should not be routinely employed, but it may be a helpful adjunct when it is not feasible to remove all of the regional metastases. Studies have not been accumulated in a sufficient number of cases to show the value of adjunct chemotherapy in the undifferentiated case. Since undifferentiated carcinoma of the thyroid gland are so uncontrollable and so lethal, this group may ultimately be treated with either inter-arterial fractional chemotherapy or direct perfusion of the thyroid gland, combined with direct irradiation therapy.

A single nodule is more apt to be malignant than a multi-nodular goiter. It is unfortunate, but the problem of judgment here so frequently results in unnecessary surgery. Many glands which are slightly enlarged and slightly irregular may show the nodularity not because of adenomas, but because of regressive changes in the gland. It is unfair to these patients to insist that they must have a thyroidectomy simply because they have a little enlargement and a little irregularity. In addition to that, sometimes a patient has an adenoma which is relatively small, perhaps a diameter of one centimeter. It is clinically a single nodule, and according to the patient, say now at age 74, it has been present without change for fifteen or twenty years. Now if one listened to the books and the statistics only, he could advise this patient to have the nodule removed. I know it has been stated from statistics that no matter how long the nodule has been there, if it is single its chances of being malignant show a persistent of the overall incidence of cancer. If I were 74 years old, had a single nodule which had been there for some sixteen years (which I am not apt to let stay there that long) I would take my chances by not having the thyroidectomy. It is true that thyroid surgery is relatively safe surgery in capable hands and the mortality can be as little as 0.1%, but at that there is a risk and it should be balanced against this risk of this sixteen-year-old nodule being malignant, and of such a decree of malignancy that it would kill the patient. I tend to emphasize this particular feature because I have so frequently seen patients who have been threatened by a doctor with the possibility of malignancy, who come to me to see whether, after having been told that the gland should be removed, I thought it ought to be removed. Under such circumstances I have told them no,

the operation is not indicated. Nor is it indicated for slightly irregular and slightly enlarged thyroid. The judgment must at times be difficult. It must always be made solely for the interest of the patient.

Single nodules in children are more apt to be malignant than single nodules in adult life. Thirty-five percent of such nodules in children are malignant, approximately twice the incidence of malignancy of simalar nodules in adult life. Carcinomas in children, however, are almost always of the papillary variety and they are less malignant and have a favorable prognosis after surgery. Carcinoma of the thyroid gland in old people is apt to be more malignant; and even though the initial type may be papillary and of low degree of malignancy, in the later decades it may change its character and become highly anaplastic.

SUMMARY

Carcinoma of the thyroid gland is a relatively fortuitous lesion if any cancer can be so designated. It has a good outlook. It is necessary to eradicate it by surgery. Adjunct therapies include Iodine-131 and, in the hormone dependent group, thyroid extract. Undifferentiated carcinoma offers no hope of cure from surgery, and perhaps this is a group in which modern chemotherapy, together with direct irradiation, may offer some alleviation and hope for control.

References:

(1) Clark, R. Lee, "The Treatment of Advanced Cancer of the Thyroid and Breast," (Panelist), Arch. of Surg. 82: 146-152, 1961.
(2) Haynie, Thomas P., Nofal, M. M. and Beierwaltes, Wm. H., "Treatment of Thyroid Carcinomas with Iodine 131," J.A. M.A., 183: 303-306, 1963.

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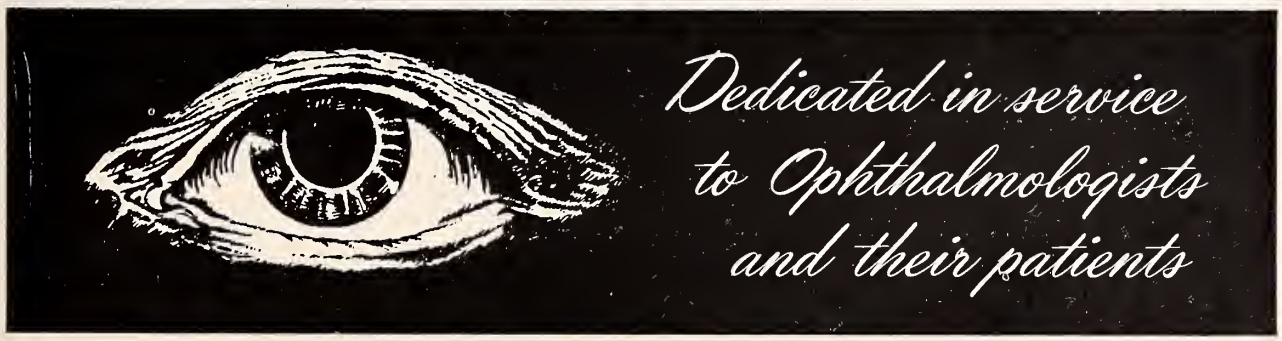
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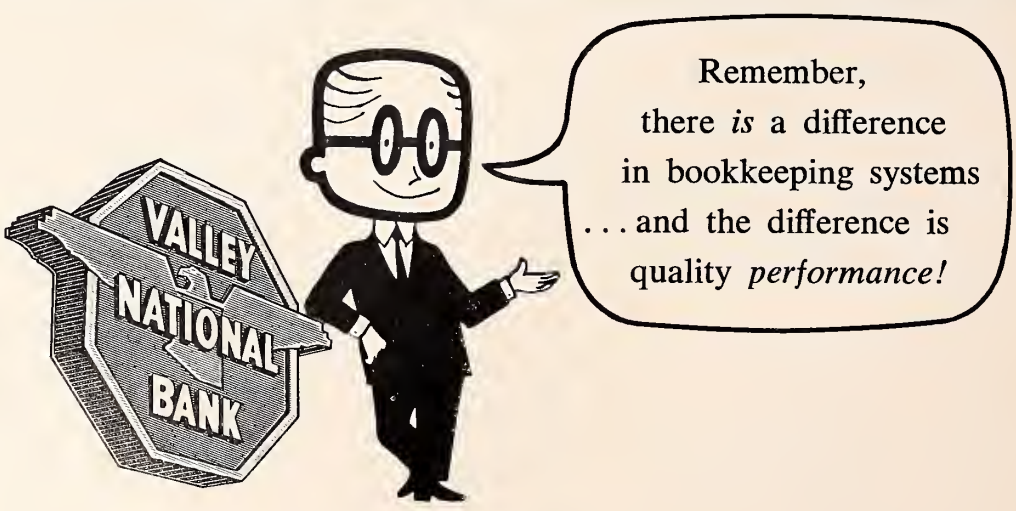
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A Medical Library: Personnel

One of the most exciting aspects of starting a new school of medicine is the opportunity to start a fine medical library. Our position is particularly unique when we consider the region which we serve. To the west, the great medical libraries are located along a line which starts in Seattle, goes through Portland and San Francisco and ends in Los Angeles. To the east of Arizona, a line of strong medical libraries starts in the Dakotas, traverses Omaha, Kansas City, Oklahoma City, Dallas, Houston and Galveston. Between these two lines there are over 1,500,000 square miles (roughly one-third of the contintentel United States) with but two medical center libraries; one at Denver, the other at Salt Lake City. It is into this setting that the library at Arizona's medical school must fit.

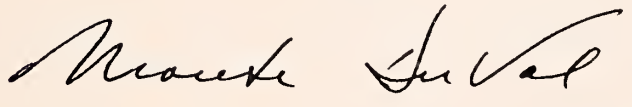
We felt that there were three steps which had to be taken in order to start a good medical library. First, we had to develop a pretty clear picture of the "mission" we felt the library should have. Second, we would need to locate a medical librarian who had the competence to translate that mission into a functioning library; and third, mobilize the resources which that librarian would need in order to get the job done.

The principal ingredient in the mission of the library obviously had to be service—and across a very broad spectrum. Although housed in a medical school and presumably capable of handling the requirements of the undergraduate medical student, the graduate student in the basic sciences, intern, resident and faculty member, a library in this part of the country obviously had to reach a long way beyond the medical center itself. Two many of our physicians are currently denied a convenient and utilitarian relationship to the scholarly record and we felt that their needs had to be measured and met if possible. But this was not enough. The state of library science is just now starting to undergo a very major revolution. This is due both to the information explosion itself and to the hardware and techniques which are being developed to "manage" the information explosion. We felt, therefore, that our librarian should also be familiar with current trends toward machine records and the possibilities which automation might hold. A final consideration was the desirability of locating someone who had been involved in the start of a new library, for the obvious reason that "know how" with respect to dealers and suppliers of older materials is not always available to the contemporary librarian whose major effort may be to keep an already fine collection up to date.

We think we are especially fortunate in having located a medical librarian who fills these prerequisites. Mr. David Bishop was born in Newfoundland in 1928. He received his Bachelor's degree at Dalhousie University in 1952 but did not become interested in library science until about four years later. Then, he enrolled in the Columbia University School of Library Science and received his Master's degree (cum laude) in Library Science in 1958. For the next four years, he served the Los Angeles County Medical Society Library, first as Junior Librarian and then as Head Reference Librarian.

At about the same time, U.C.L.A. decided to develop a dental library for its new College of Dentistry. Having learned of Mr. Bishop's talents U.C.L.A. persuaded him to develop this new dental library. He was later assigned a major role in converting the U.C.L.A. Biomedical Library to an automated, machine-record system for its serials in preparation for housing the first MEDLARS division of the National Library of Medicine.

We think David Bishop will develop a superb library for our school. We also think that his background and orientation to the physician in practice will come to be very important in our state over the next few years.







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Annual Meeting

Nearly three quarters of a century ago 15 early Arizona Territorial physicians met at the Commercial Hotel in Phoenix and organized a medical society. From this early group of 15 the State Medical Association has grown to 1,450, approximately. The 75th Annual Meeting of this Association will convene April 27, 1966, at the Safari Hotel in Scottsdale.

The meetings of the early years concerned themselves with legislation relative to a state board of health, licensing of physicians, methods of committing the insane to mental institutions, the sale of poisons, laws effecting abortionists, pollution of rivers and streams, raising the age of consent from 14 to 21 years and the teaching of hygiene to children. More clinical subjects were added in time and demonstration clinics held in local offices and hospitals were relied upon for much of the scientific interest.

The 75th Annual Meeting will be attended by the officers, board of directors, and more importantly by several hundred members of the State Medical Association.

The scientific program this year will consist of the following Professors from Northwestern University Medical School.

John M. Beal, Jr., M.D. – Department of Surgery

"Review of Mammary Carcinoma – Radical Versus Conservative Surgical Therapy"

"Management of the Lumpy Breast" (When to Biopsy)

Edward L. Compere, M.D. – Department of Orthopaedic Surgery

"Progress in Spinal Surgery"

Ronald R. Greene, M.D. – Department of Obstetrics & Gynecology

"Newer Concepts in Contraception"

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3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.
4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
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Robert B. Lawson, M.D. — Department of Pediatrics
"Respiratory Infections in Children"
"The Effects of Drugs on the Newborn Child"

Jules H. Masserman, M.D. — Department of Psychiatry
"Psychopathology of the Unwashed" (Beatniks, kooks and pseudo-intellectuals)

Sheldon S. Waldstein, M.D. — Department of Medicine
"Uses and Abuses of Steroids"
"Pitfalls of Thyroid Function Tests"
Panel — "Recent Advances in the Diagnosis and Management of Arthritis, Rheumatism and Gout"

Harvey White, M.D. — Department of Radiology
"Vascular Contrast Studies in Radiologic Diagnosis"
Samuel J. Zakon, M.D. — Department of Dermatology
"Practical Office Procedures in Dermatologic Diagnosis and Treatment"

The Board of Directors and the corporate body of Blue Shield will discuss and make recommendations on Fedicare, "non-participation," the separation of Blue Cross and Blue Shield into two independent groups with separate executive directors, and the provocative concepts of "reasonable, usual, and customary fees."

Another important item on the agenda will be announcement of completion and publication of the book **Medicine in Territorial Arizona** underwritten by your Association.

The annual meeting is the place to air views, make recommendations, and register objections. Decisions affecting your future will be made. I hope that you are there so that the decisions are made with your advise and consent. Only then can they be the right decisions.

Robert F. Lorenzen, M.D.
Editor
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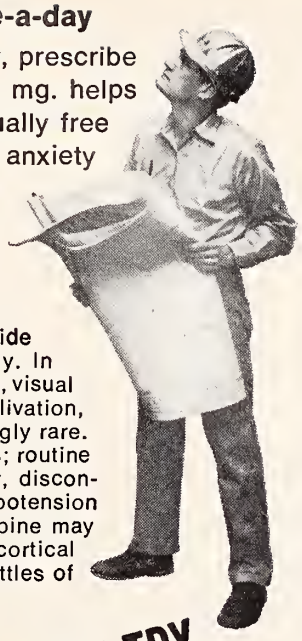
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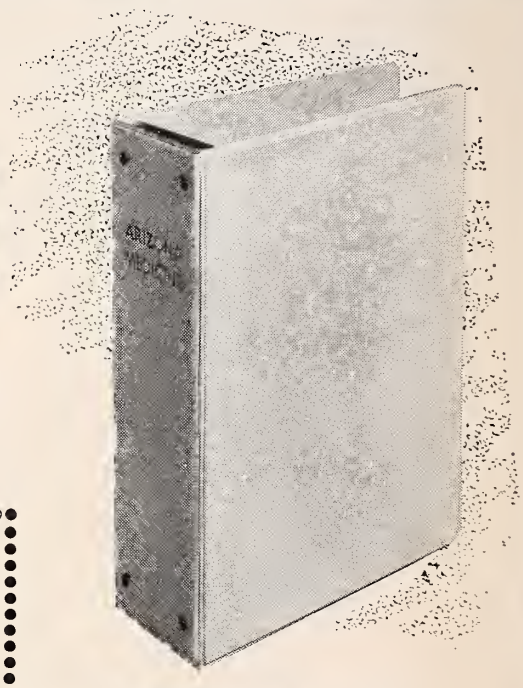
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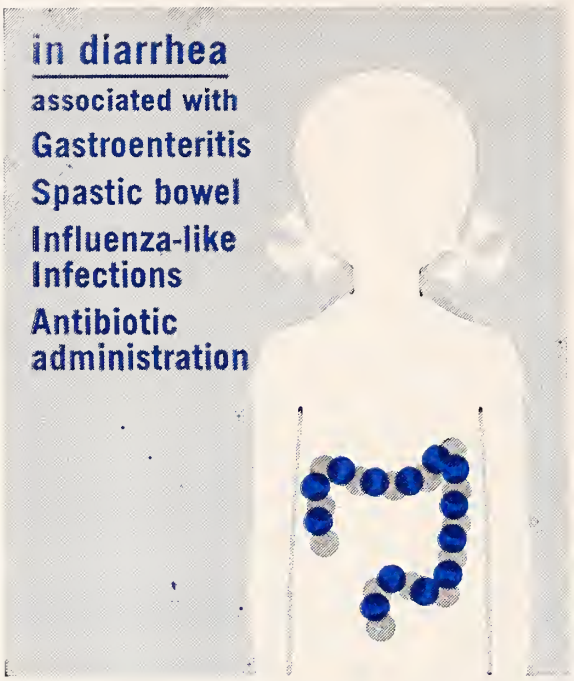
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assures maximum attention and consideration
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normal activity... **...promptly**

with **LOMOTIL®** liquid tablets

Each tablet and each 5 cc. of liquid contains:
diphenoxylate hydrochloride 2.5 mg.
(Warning: may be habit forming)
atropine sulfate 0.025 mg.

In children with diarrhea prompt symptomatic control is usually urgently indicated to relieve cramping and to prevent dehydration.

Lomotil halts precipitous progress through the intestines and controls diarrhea with notable promptness, safety and effectiveness.

Experimental evidence[1] has shown that Lomotil is more efficient in this regard than morphine without the latter's manifest disadvantages. In roentgenographic study[2] Lomotil slowed gastrointestinal propulsion within two hours.

At the same time, by diminishing overstimulation of the intestines, Lomotil relieves the abdominal cramps and discomfort so distressing to youngsters.

Lomotil gets children off toast and tea and back to normal diets and normal activity with gratifying celerity.

Dosage: For full therapeutic effect—Rx full therapeutic dosage. The recommended initial *daily dosages*, given in divided doses, until diarrhea is controlled, are:

Children:
3 to 6 months—3 mg. (½ tsp.* t.i.d.)
6 to 12 months—4 mg. (½ tsp. q.i.d.)
1 to 2 years—5 mg. (½ tsp. 5 times daily)
2 to 5 years—6 mg. (1 tsp. t.i.d.)
5 to 8 years—8 mg. (1 tsp. q.i.d.)
8 to 12 years—10 mg. (1 tsp. 5 times daily)

Adults: 20 mg. (2 tsp. 5 times daily or 2 tablets 4 times daily) *Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one fourth the therapeutic dose.

Precautions: Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is an exempt narcotic preparation of very low addictive potential. Recommended dosages should not be exceeded. Lomotil should be used with caution in patients with impaired liver function and in patients taking addicting drugs or barbiturates. The subtherapeutic amount of atropine is added to discourage deliberate overdosage.

Side Effects: Side effects are relatively uncommon but among those reported are gastrointestinal irritation, sedation, dizziness, cutaneous manifestations, restlessness and insomnia.

1. Janssen, P. A. J., and Jageneau, A. H.: A New Series of Potent Analgesics: Dextro 2:2-Diphenyl-3-Methyl-4-Morpholinobutyrylpyrrolidine and Related Amides. Part 1: Chemical Structure and Pharmacological Activity, J. Pharm. Pharmacol. 9:381-400 (June) 1957.

2. Demeulenaere, L.: Action du R 1132 sur le transit gastro-intestinal, Acta Gastroent. Belg. 21:674-680 (Sept.-Oct.) 1958.

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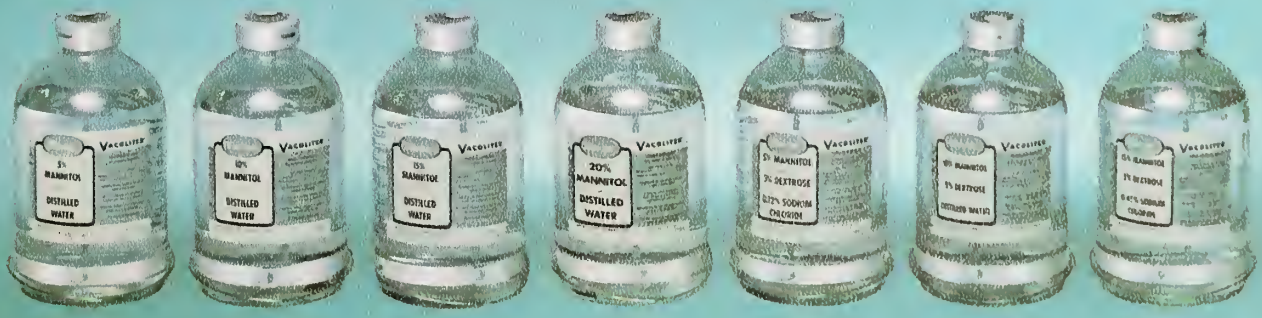
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20% Mannitol in water

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DEDICATED LEADERSHIP IN FLUID THERAPY

Quackery

"Physicians, as conservators of the public health, are bound to bear emphatic testimony against quackery in all its forms."

Is this a quote from proceedings of the American Medical Association's Clinical Convention in Philadelphia in December?

The meeting was in Philadelphia, but the year was 1847!

So you see, from its very inception 118 years ago, the American Medical Association has been battling quackery and it is dedicated to a continuation of this warfare against wasting the nation's health and its health care dollar . . . of fighting fraud at the bedside of ill and desperate people.

For, as long as there are human beings, there will be human nature . . . and quacks — pretenders to ability they don't possess — to take advantage of the fact.

The health quack is not so easy to spot these days. The stovepipe hat and the pitchman's hawking have gone. In their place are their space-age counterparts, the suave, apparently, sophisticated super salesmen with the Madison Avenue manners.

These merchants of menace, more insidious and unscrupulous than ever, have many new products, worthless diet fads, worthless food supplements, worthless cosmetic devices and treatments, worthless "cures" for everything — even into the area of brain-damaged children and other mental illness.

They bilk the undiscerning — the uninformed, the desperate, the unsuspecting of all ages — of millions of dollars a year. The estimates of the costs of medical quackery are at best calculated guesses, but they have gone as high as a billion dollars a year. And one authority in the field of quack-fighting has stated that "medical quackery each year costs more lives than all crimes in the United States."

It is this cost of life — and health — that has placed America's physicians in the front lines of the war on quacks. It is the insidious side effect of quackery with which medicine concerns itself — the delay in proper medical care that may cost life itself.

It is for this reason, too, that the medical profession is dedicated to education of the people about cultism — chiropractic and the other health sects that turn their backs on scientific medicine.

The House of Delegates of the American Medical Association said in 1933:

> "Either the theories and practices of scientific medicine are right and those of the cultists are wrong, or the theories and practices of the cultists are right and those of scientific medicine are wrong."

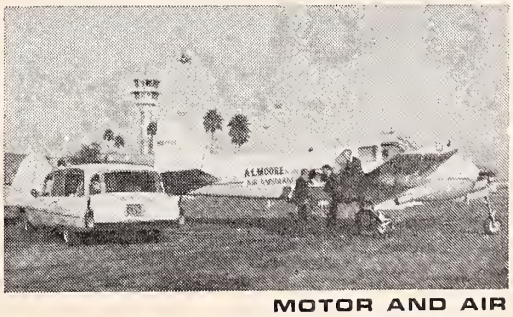
And in 1961, it said:

> "There can never be a majority party and a minority party in any science . . ."

After the quack or the cultist has extracted his pound of flesh — after the damage is done and after the sick may have become the dying because of the delay in proper care — scientific medicine usually is called upon to pick up the pieces.

Medicine has tried and will continue to try to do that job, too, but how much easier the job would have been — how many lives would have been saved — if . . .

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In congestive heart-failure patients, AQUATAG (benzthiazide) produced the same weight loss, during a 48-hour treatment period as did a maximally effective dose of hydrochlorothiazide.

DOSAGE: Diuresis, initially 50 to 200 mg.; maintenance 25 to 150 mg., daily. Hypertension 50 to 100 mg. initially, adjusted to 50 mg. t.i.d. or downward to minimal effective dosage level.

PRECAUTIONS AND SIDE EFFECTS: Electrolyte imbalance with hypokalemia, hypochloremic alkalosis and hyponatremia may occur. Other reactions may include blood dyscrasias, hyperuricemia and gout, nausea, jaundice, anorexia, vomiting, diarrhea, dizziness, paresthesia, photosensitivity and headache. Insulin requirements may be altered in diabetes.

WARNINGS: Dosage of coadministered antihypertensive agents should be reduced by at least 50%. Use with caution in edema due to renal disease; advanced hepatic disease or suspected presence of electrolyte imbalance. Stenosis or ulcer of small intestine have been reported with coated potassium formulas and should be administered only when indicated. Until further clinical experience is obtained, the use of the drug in pregnant patients should be carefully weighed against possible hazards to the fetus.

CONTRAINDICATIONS: AQUATAG (benzthiazide) is contraindicated in progressive renal disease or disfunction including increasing oliguria and azotemia. Continued administration of this drug is contraindicated in patients who show no response to its diuretic or antihypertensive properties.

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JESSE D. HAMER, M.D.
1898-1966



Jesse D. Hamer, M.D. died on January 13, 1966, at the age of 67. He was born March 28, 1898, at Lyndon, Ohio. The son of a steel foundry foreman he completed High School in Springfield, Ohio, and his bachelor's degree was given from Wittenberg University in 1922. He graduated from Western Reserve University. He was one of six of his graduating class receiving the Alpha Omega Alpha Fraternity honorary recognition. Internship in Cleveland and residency at the Good Samaritan Hospital preceded his joining Dr. George Goodrich in practice, particularly internal medicine. About six weeks before his death he became ill with pneumonitis and complications.

His major contribution to the medical profession was in representing the county and state societies in legislative efforts. None could more clearly appreciate his effectiveness in this area than Robert Carpenter, who wrote the following tribute to Dr. Hamer.

"One of the more important activities engaged in so effectively by Dr. Hamer was in the field of legislation. At the time of his untimely death, he headed the legislative committee of the Arizona Medical Association as its chairman in which capacity he served for many years past. He was always a champion of good legislation in the fields of health and welfare in the best interest of the citizenry of this great state firmly of the conviction that what is good for the people would rebound equally to the benefit of his profession and the advancement of scientific medicine.

Dr. Hamer possessed a winning personality — he was modest, retiring, professionally competent and always a good listener. When he spoke he understood the subject matter, was knowledgeable of the facts, and his utterances were supported with authority. He very early in this field won the respect and confidence of the legislators, who frequently sought him out for his guidance and wise counsel. He gave abundantly and freely of his time and talents, often at considerable financial hardship, and was ever available to the legislative body in an emergency when anyone away from home sought his professional services.

It would be impossible in this short space allotted to list all of the legislative bills, both state and national, in which Dr. Hamer was an active participant lending his efforts and association support in either approval or disapproval thereof. We will limit discussion to those on the state level and not necessarily in chronological order.

A measure that has stood the test of time with a few amendments through the years since its final enactment in 1936, is the current Arizona Basic Science Law, which is designed to assure the citizenry that those licensed to engage in the healing arts at least have the minimum knowledge in the basic sciences. Then, we have the current Medicine and Surgery Act governing the licensing of doctors of medicine practicing in Arizona. Enacted in 1964, this measure completely rewritten upgraded the standards for licensure and has been considered by many as a "model" statute. Supported current statutes dealing with tuberculosis; humane mental health commitment procedures; creation of a board of anatomy; ratification of compact better known as the Western Interstate Compact for Higher Education, providing financial assistance to students seeking a higher education in the professional fields of dentistry, medicine and veterinary medicine; revision and updating of the statute relating to the Arizona Board of Health and State Department of Public Health; providing premarital examinations associated with the

granting of a marriage license; licensing of dispensing opticians; creation of a board of physical therapy examiners; updating examination, licensure and regulation of the practice of professional nursing; creation of an Atomic Energy Commission in Arizona; revision of the Pharmacy Act; providing for the donating or bequesting of one's body or any part thereof at death for the purpose of medical science and rehabilitation of the maimed; providing for hospital survey and licensure and the creation of the Advisory Survey and Construction Council for administration of the construction of hospitals and finally, in 1965, after three long years of struggle, enactment of the statute implementing Kerr-Mills legislation.

In the field of legislation, surely many other measures of equal importance, both state and nationally, could be added to the long list of accomplishments of our stalwart statesman, Jesse Hamer. Suffice to say that he has served his fellow man faithfully and well. We are the benefactors of his untiring and conscientious stewardship."

Closely associated with him in later years in medical organization matters was Dr. D. W. Melick who wrote the following.

"Jesse Hamer was a man of old fashioned ideals. In these days when such a good man is hard to find he will be irreplaceable. If primary interest in the health and welfare of the patient is presumably the avowed concern of all physicians, Dr. Hamer was certainly one of those. If a benevolent attitude toward intransigent colleagues is an attribute, he often tolerated his fellow practitioners out of the ordinary. If an interest in civic affairs is considered a moral responsibility of the well-rounded physician, Jess was a full-fledged participant and an example for younger physicians to follow. If years of dedication to the betterment of the practice of medicine can be measured in dollars and cents by his service to you and me and American Medicine, through his responsibility as a delegate from Arizona to the American Medical Association, then place after his name; "in excess of one hundred thousand dollars." If secret financial assistance to impecunious students is of merit, this too was known of him and stands as a hallmark in the makeup of his character.

Very few of us have the inclination, the dedication or basic drive to do for each other what Dr. Hamer did for all of us.

Surely in the good book, Jess Hamer's name will be writ and like Abou of old his name shall lead all the rest."

Dr. Hamer was prominent in the Southwestern Medical Association for a number of years and was president of the Arizona Medical Association during the period of strengthening of the Arizona State Medical Journal. He worked with the Boy Scout Organization throughout most of his life acting as medical consultant at summer camps. During the war many of the English boys located at Falcon field spent much spare time with the Hamers and one of these boys came back and lived with them for four years, receiving a degree from the University of Arizona in engineering and returning to England to practice this profession.

Besides his wife, Clarice, Dr. Hamer is survived by a brother, Walter, of Columbus, Ohio, and a sister, Mrs. Dorothy Reichert of Phoenix.

Dr. Hamer would wish to be remembered for is great attainments while representing the Arizona Medical Association in the house of Delegates of the A.M.A. from 1934 until 1961, serving on many of its important committees. He was elected vice-president of this great organization.

Many will remember him for his community service, and many patients will remember his skill as a physician. His confreres will miss him as a reliable, congenial fellow worker.

Howell S. Randolph, M.D.

HENRY LEROY FRANKLIN, M.D.
1887-1965

Dr. Franklin died in Phoenix on December 29, 1965, after a prolonged illness. Full military rites and burial were performed January 3, 1966, at Fort Rosencrans National Cemetery, San Diego, California.

He was a native Texan. His medical degree was received from Tulane University in 1917. He was one of five outstanding students in his class chosen for special Navy service and training. After appointment at graduation as a Lieutenant, he received training at U. S. Navy Medical School, Washington, D. C., before as-

suming active duty during World War I. Following the Armistice he served as a member of the Hoover Commission to Germany. He remained active in the Naval Reserve until 1929, at which time he resigned with the grade of Lt. Commander.

Dr. Franklin then continued his training at St. Luke's Hospital in San Francisco and engaged in general practice in that area until 1930. He then completed special training in Ophthalmology at the University of California. Certification by the American Board of Ophthalmology was given in 1938.

Dr. Franklin came to Phoenix in 1931 as Ophthalmologist at Lois Grunow Clinic, later transferred his practice to the Professional Building where he maintained his office until retirement in 1958. He was a competent physician, beloved by his patients, admired and respected by his confreres.

He served as President of Maricopa County Medical Society. It was during his term of office that the Salt River Valley Blood Bank, now widely known as the South West Blood Banks, Inc., was established.

His many friends will long remember him as a quiet, unpretentious and compassionate man — one who never sought the limelight. He was extremely well read, a good conversationalist, a gracious host, a true gourmet. There could never be too many guests at the Franklin's garden parties given at their home on North 16th Street. The food was chiefly of his choosing and preparation, and with the able assistance of his wife, Madeline, there was nothing left to be desired.

After retiring to Sun City, Dr. and Mrs. Franklin traveled extensively, and he was able to enjoy his favorite sport — fishing. He also remained active in civic affairs of that community as long as health permitted.

Dr. Franklin is survived by his wife, Madeline, of Sun City, Arizona; son George, an aeronautics engineer assigned to the N.A.S.A. program, stationed with his family at Houston, Texas; and daughter, Patricia, of Buena Park, California.

To know Dr. Franklin was to love and admire him. It was my privilege to know him over a period of 25 years and to be called his friend.

Ben P. Frissell, M.D.

PROCEEDINGS — FIFTH NATIONAL CANCER CONFERENCE

The American Cancer Society has announced the publication of the Proceedings of the Fifth National Cancer Conference held in Philadelphia, Pa., September 1964. They may be purchased from the publisher, the J. B. Lippincott Company, for $10.00 per copy. Some of the topics covered in this 764 page volume of Proceedings are as follows:

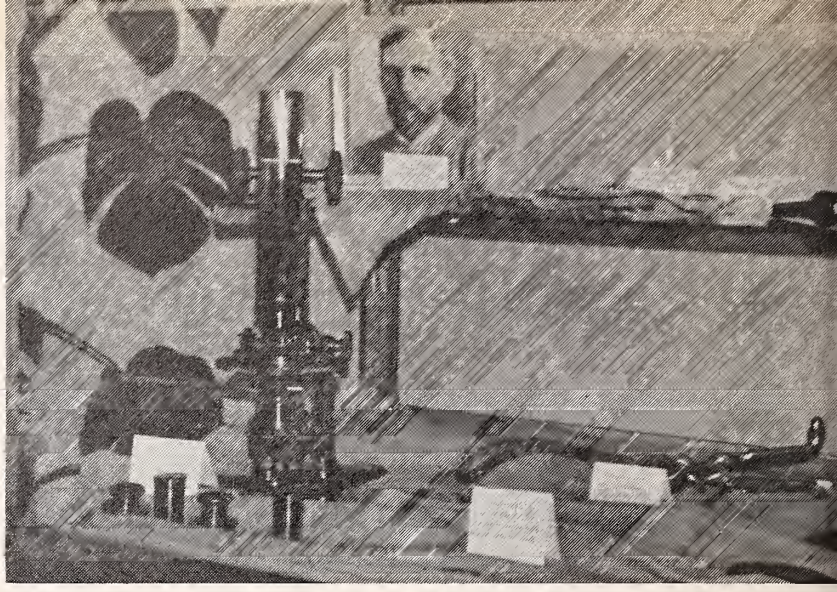
The Epidemiology and the Biology of Cancer
Trends in Cancer Therapy and Patient Survival
Tumors of the Bone
Lymphomas and Leukemias
Evaluation of Perfusion and Infusion
The Future Potential and Evaluation of Preoperative Radiation

This publication will be of interest to physicians, research scientists, and medical students. Also, consideration should be given to purchasing copies for hospital, medical school and medical society libraries.

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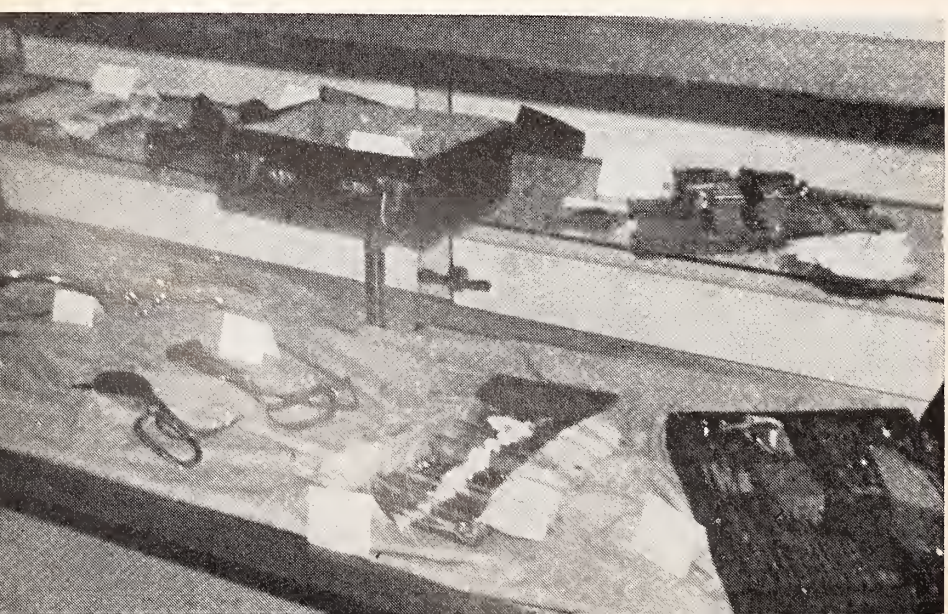
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CORRESPONDENCE

January 7, 1966

Dear Mr. Carpenter:

On February 1, 1966, PL 89-74 goes into effect. As has been widely publicized, its purpose is to curb drug abuse through the curtailment of illicit drug traffic. To accomplish this, the law establishes special controls over the manufacture and distribution of depressant and stimulant drugs. Among these controls is the keeping of records of the manufacture, sale, delivery, and receipt of such drugs, and it is to this matter of record-keeping, insofar as it refers to physicians, that I would like to invite your attention.

Recently, there has been some confusion as to what records a physician must keep under PL 89-74. Putting it simply, **they are not required to keep records as a consequence of this law unless, in the course of their practice, they dispense the drugs referred to and charge for them.** The law is quite clear on this, and I quote from that part of the Act relating to recording-keeping:

> "The provisions of paragraphs (1, Records) and (2, Inspection) of this subsection shall not apply to a licensed practitioner . . . with respect to any depressant or stimulant drug received, prepared, processed, administered, or dispensed by him in the course of his professional practice, unless such practitioner engaged in dispensing any such drug or drugs to his patients for which they are charged, either separately or together with charges for other professional services."

The key phrases in this paragraph are the words "regularly engaged" and "for which they are charged."

Further is this regard is a quote from the House Report of the Committee on Interstate and Foreign Commerce on H.R. 2 which became PL 89-74:

> "The committee intends . . . to require record-keeping and to permit inspection in the case of those physicians who maintain a supply of pharmaceuticals or medicinals in their offices from which they compound prescriptions for their patients for a fee."

The language of the Senate Committee Report is identical. Both committee reports stated that those required to keep records "involve only a very small percentage of physicians."

The proposed regulations underscore this point, indicating that ". . . maintaining of small supplies of these drugs for dispensing or administering in the course of professional practice in emergency or special situations will not be considered as regularly engaged in dispensing for a fee."

For those physicians who, in the course of their practice, **regularly dispense drugs and charge for them,** certain records are required to be kept for three years, effective February 1, 1966. Included are: a complete, accurate record of all depressant and stimulant drugs on hand February 1, 1966; a complete, accurate record of the kind and quantity of each drug received sold, delivered or otherwise disposed of; the name, address (and registration number under Section 510 (e) of FDCA) of the person from whom the drugs were received, and to whom they were sold, delivered, dispensed or otherwise disposed of; and the date of the transaction. No separate form for these records will be required as long as the information specified is available.

Summing up, under PL 89-74 physicians do not have to keep records **unless** they regularly dispense the drugs covered by the Act and charge for them.

It is possible that you may wish to make this information available to your membership.

Best personal regards,
/S/ C. Joseph Stetler
President
Pharmaceutical Manufacturers Association

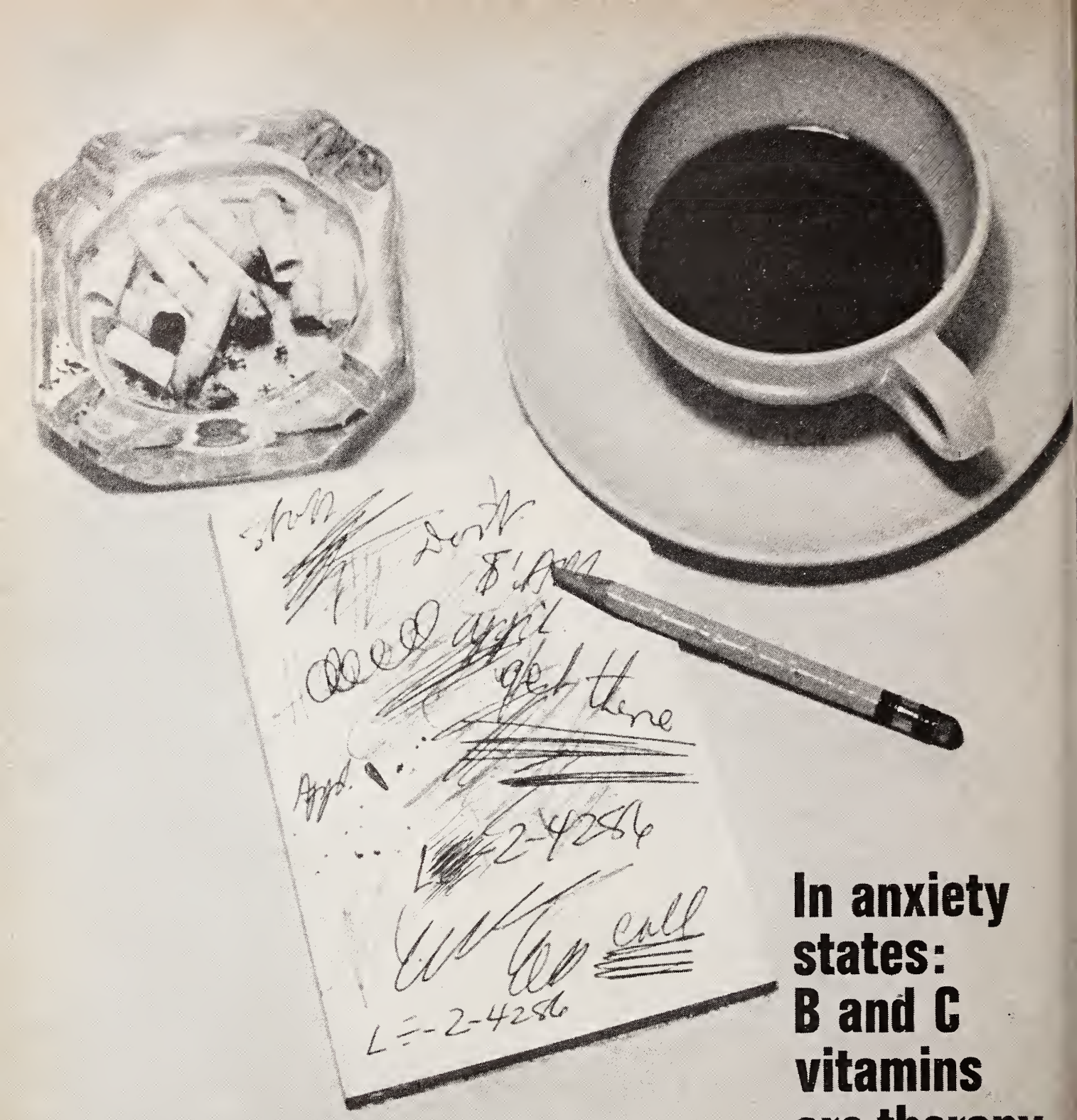
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Dear Sirs:

I received your letter with the good news of my having been granted the scholarship for which I had applied. I want to thank you very much for making it possible for me to attend medical school. As you know, medical school expenses are high and I couldn't possibly have afforded to attend without your help.

Thank you so much for extending this help to me. I will do my very best to be worthy of it and I hope some day I will be in the position to do the same for someone else.

Sincerely
Maria Diaz Herrera



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Squaw Peak Sketches

Of Pithy Pioneer Physicians

by dry gulch jake

BEGINNING A SERIES OF HISTORICAL SKETCHES COMMEMORATING THE ASSOCIATION'S 75TH ANNIVERSARY

ITEM

In rambles through the Orville Harry Brown, M.D. collection of medical history, newspaper and other records made available by Joseph Miller of the Library and Archives State Capitol Building, from these and other sources the following short sketches are derived. To the "old-timers" this will refresh their memory about some nearly forgotten colleagues, and for the "newcomers" maybe, one amongst you, will be stimulated to search out other interesting contributions by your predecessors in this Territory and State.

ITEM

Early in 1850 this physician established a regular ferry on the Colorado River below its junction with the Gila on the former site of Camp Calhoun. This was for the purpose of crossing emigrants, their stock and wagons. With a fine disregard for the Indian's priority rites in this ferriage business, the doctor and his associates held the field. In fact a few days before he met a sudden end he wrote to his parents that he was doing well, making money running the ferry, that he had no trouble in getting help, he simply used the deserters from the Army who drifted through. But his business was liquidated shortly, all hands were decimated by the American—i.e. the Indians who felt themselves left out of the ferry business.

This was Dr. Abel B. Lincoln, said to have been a relative of the President.

ITEM

This physician was indeed a community leader and pioneer in the Territorial Days but never practiced medicine in the State. He was graduated from New York Medical College in 1884, he then spent some time in California and later came to Prescott. With John Roundtree he established the first saloon in Prescott under some large pine trees on lower Goose Flats. It was built of cloth and timber around a wagon. Soon after this he emigrated to Phoenix with his brother-in-law John Osborn and established a ranch in the vicinity of McDowell Road and Seventh Street. The doctor was appointed the first Territorial treasurer of Arizona by Governor Goodwin.

He was the first probate judge of Maricopa County when it was established and the first Mayor of Phoenix after it was incorporated as a city. He served four terms in the Arizona Territorial Legislature, twice from Yavapai County and twice from Maricopa County.

This physician was Dr. John Alsap.

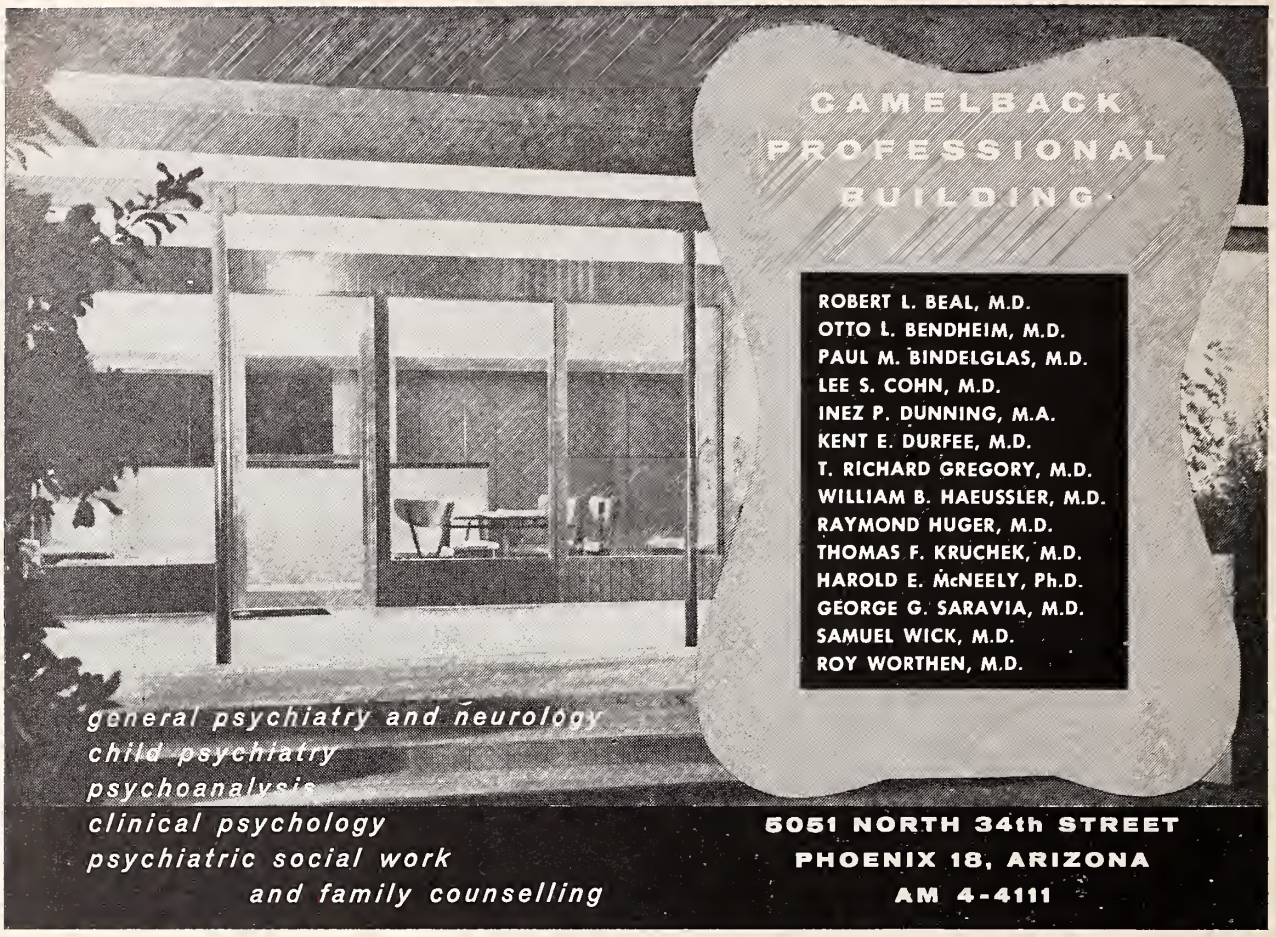
ITEM

This physician contracted with the Cochise County Board of Supervisors to attend the County sick at $1.10 a day, if they were in the County Hospital, and for $150.00 a month to act as County Physician. He was to hold post mortems, examine the sick throughout the County and take charge of all epidemics. His bond was set at $2,500.00.

This is from the records of the Board of Supervisors of Cochise County, December 27, 1882.

The physician was Dr. George Goodfellow.

John W. Kennedy, M.D.



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Trocinate (Thiphenamil HCl) has been found in three clinical studies, (J. Mo. Med. Assoc., 48:685-6; Med. Rec. & Annals, 43:1104-6; J. Urol., 73:487-93), to be effective and to be free of side-effects. Fifteen years of wide clinical usage has affirmed the safety and effectiveness of Trocinate.

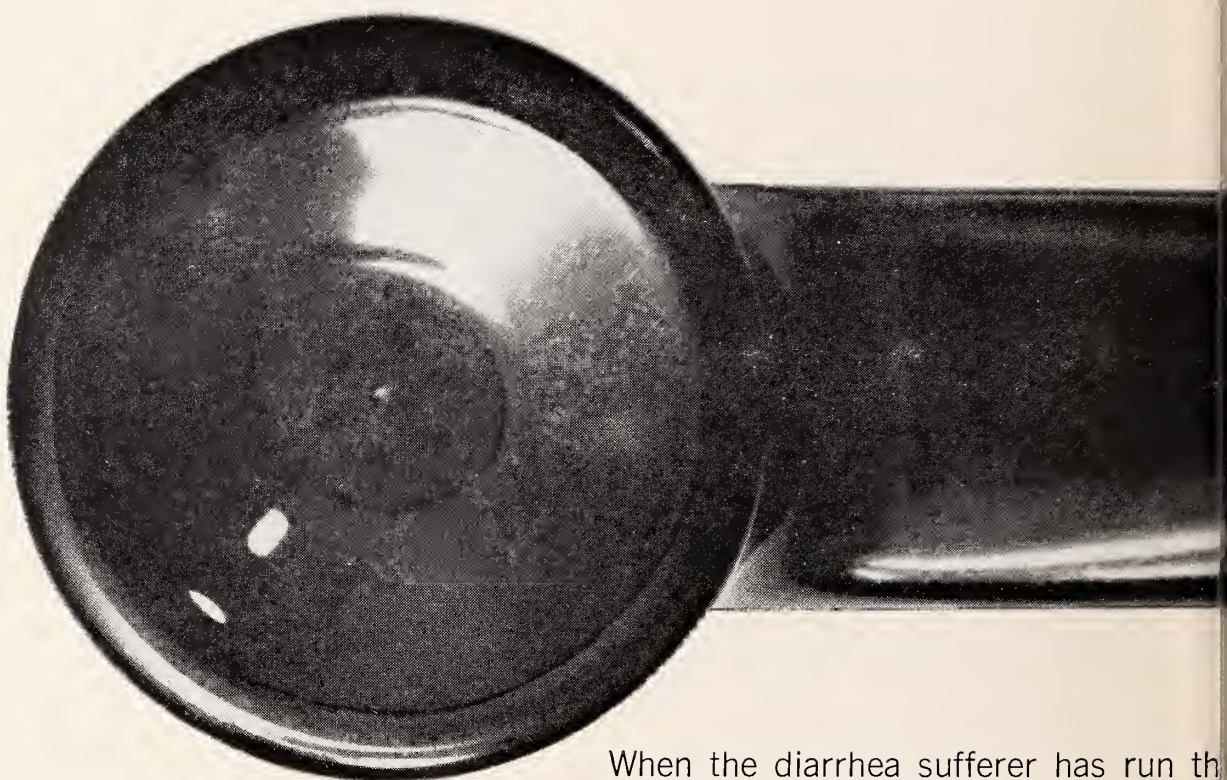
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When uncontrolled diarrhea brings a call for help



When the diarrhea sufferer has run th
gamut of home remedies without succes
pleasant-tasting CREMOMYCIN can answe
the call for help. It can be counted on t
consolidate fluid stools, soothe intestina
inflammation, inhibit enteric pathogens
and detoxify putrefactive materials—usu
ally within a few hours.

CREMOMYCIN combines the bacteriostati
agents, succinylsulfathiazole and neomy
cin, with the adsorbent and protective de
mulcents, kaolin and pectin, for compre
hensive control of diarrhea.

Indications: Diarrhea. *Contraindications:* Kaoli
Withhold if diverticulosis is present or suspecte
Precautions: Sulfonamide: Continued use require
supplementary administration of thiamine and vit

your ℞ for Cremomycin can provide relief



hin K. Neomycin: Patient should be observed for ew infections due to bacteria or fungi. *Side Effects:* ulfonamide: Sensitivity reactions may occur (e.g., kin rashes, anemia, polyneuritis, fever; agranulo- ytosis with a fatal outcome has been reported). eduction of thiamine output in the feces and of itamin K synthesis has been observed. Neomycin: lausea, loose stools possible.

efore prescribing or administering, read product ircular with package or available on request.

romptly relieves diarrheal distress

Cremomycin®

ANTIDIARRHEAL

omposition: Each 30 cc. contains neomycin sulfate 00 mg. (equivalent to 210 mg. of neomycin base), uccinylsulfathiazole 3.0 Gm., colloidal kaolin 3.0 m., pectin 0.27 Gm.

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here today's theory is tomorrow's therapy

MEDICARE

Medicare benefits for people over age 65 do not go into effect until July 1, 1966.

To assure yourself of protection and coverage, if you are presently a Regular Blue Cross/Blue Shield member, keep that membership. Then when Medicare becomes effective, to fill out your program, get the Supplemental Blue Cross/Blue Shield coverages, and you will have the most complete hospital-surgical-medical program there is.

Get this protection from the people who have cared for people for over 35 years.

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Please send me information on BC/BS Medicare Supplemental Coverages when available
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Be Sure To Enroll Under Medicare "3"

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This Informational Advertisement Appearing in Arizona Dailies

SOCIAL SECURITY AND THE DOCTOR

Social Security coverage came to the physician last year as one of the many facets of the multi-tiered Medicare Law and with the coverage came a tax bite, some benefits, and a lot of questions.

The tax bite is easy to explain: You owe the government $259.20 for 1965 coverage and if you haven't paid it yet, it's due by April 15. For 1966, you will owe $405.90.

The extent of the benefits is more difficult to explain: it depends on a complicated system of credits.

FIRST, THE TAX BITE.

The year ending on or after December 31, 1965, is the first year that physicians have had to make payments on their net earnings into the social security program. Your payment is due when you file your income tax return for 1965. You are required to use the same forms that you have always used to report your earnings. Form 1040 and Schedule C. The only difference is that now you must fill out the detachable portion on Page 3 of Schedule C, called Schedule SE. Then you mail your payment with your income tax return to the Internal Revenue Service which forwards Schedule SE to the Social Security Administration as a record of your payment.

How much you pay into this program is determined by the present tax rate and the maximum earnings to be taxed. Nothing under net earnings of $400 is taxable. On 1965 earnings, the tax rate is 5.4% on all net earnings up to $4,800. Therefore, the maximum payment for 1965 is $259.20. Your earnings during the year 1966 will be taxed at a rate of 6.15% on maximum earnings of $6,000, requiring a maximum payment of $405.90. Additional increases in both the tax rate and maximum taxable earnings are scheduled to continue through 1987.

Your payment for 1965 must be a lump sum, but beginning this year, you can pay quarterly in the same manner as you probably pay your income tax.

NEXT, THE BENEFITS.

You and your family will receive benefits from participation in the social security program as you accumulate quarters of credit required for old age, survivor, disability insurance, and Medicare benefits.

Medicare benefits are available to all physicians 65 or older without any accumulation of credits necessary, beginning July 1.

If you reach 65 years of age before July 1, you will not be eligible for any old age, survivor, or disability insurance benefits under social security. You must pay at least six quarters (four in 1965 and two in 1966) before you become eligible for any benefits at all, and then they are minimal.

Once you have accumulated six quarters, you fall into the category of a "currently insured" person and your family is able to claim some survivor benefits. These benefits go only to your wife if she has dependent children (under 18), to your children under 18, and to students age 18-21. There is also a lump-sum death benefit payable.

Any other benefits available under social security require that you have a "fully insured" status, and this will be reached as you accumulate the needed quarters of credit. A chart on Page 26 of the booklet "Medicare and Social Security Benefits" that is being distributed by the State Society shows the number of quarters that you need before you are "fully insured."

Most physicians do not retire at age 65. You are allowed to earn no morn than $1,500 a year in wages or net earnings from self-employment if you wish to fully collect social security-retirement benefits. Any retirement money that you receive other than wages or net earnings from self-employment, does not count against these payments. If you earn from $1,500 to $2,700, $1 in benefits will be withheld for each $2 you earn; for every $1 that you earn over $2,700, $1 in benefits will be withheld.

Physicians over 72 years of age can earn any amount and still collect full social security payments.

While you are in the 65-72 age bracket, no matter how much you earn in a full year, you may get benefits for any month in which you do not earn over $125 in wages or net earnings as a self-employed person.

The conditions covering benefits are so complicated as to make it impossible to explain individual cases in a general article. Specific information can be obtained from the regional office of the Social Security Administration nearest you.

PENNSYLVANIA MEDICAL SOCIETY NEWSLETTER
Vol. 9, No. 1

Participate In Medicare? Not Me!

The medical profession's widespread misunderstanding of non-participation is, I believe, equalled only by its failure to recognize the nature of the general crisis, of which Medicare is but a symptom. The importance of non-participation can be appreciated **only** against the background of that crisis. Let's look at is quickly.

It may be that our existence as the home of the brave, land of the free and acknowledged world leader is entering its terminal stages. Our flag is spat upon, our embassies stoned and trading with the enemy is defined as being in the "national interest." In our city streets contempt for law and order is demonstrated by mob action, **encouraged** by our national leaders. Pressure groups, their grievances mostly imaginary, control the legislative processes. Those once great deliberative bodies now act mainly as a box office for the public trough.

The degree of domination of our lives by the Federal government is matched only by its own moral and fiscal bankruptcy. Oozing benevolence from every pore, the administration invites us to lay at its feet all our cares and responsibilities. Concern for our liberties has so diminished that there is scarcely a cry when the mask of Federal benevolence is ripped away as recently occurred with the blackmail of the aluminum industry. Daily, it is pounded into our ears that **only** those in Washington are kind, strong, and know what is best for us. Some accept this as truth, in spite of the fiscal irresponsibility rapidly becoming apparent. For every day it was in session, the first session of the 89th Congress appropriated in excess of $300 million dollars. Yet, the same government cannot afford to put silver in its coins. While we proclaim to be the saviors of the free world, we cannot maintain a friendly government 90 miles from our shore.

Doesn't all this add up to a crisis? I think so. I think we have about "been had."

Nevertheless, we are complacent. Our profession has just been defeated in a battle, the loss of which we have always said would mean the beginning of socialized medicine and the decline of quality medical care. But no one is every excited.

With the proposed repeal of Section 14b defeated, the Communist party on trial — again, and the Department of Health, Education and Welfare being "advised" by the A.M.A., a strange and depressing complacency has settled like a brainwashing fog over the spirits and minds of a large segment of the medical profession. Colleagues formerly articulate and active in the defense of their rights have become tongue-tied, apathetic and stingy. Almost everyone seems convinced we can safely take leave of our senses. And they may be right. Maybe we can take leave of our senses. Maybe this country no longer needs a medical profession. After all, the Great White Father in Washington is so skilled he can perform a total enterocolectomy on better than half the doctors without leaving a scar. Using neither scalpel nor hemostat, only hypnosis for anesthesia and a few disarming cliches instead of 4 x 4 sponges, he has succeeded in separating a large segment of the American medical profession from its guts. Now, having lost the battle we recognized would lead to loss of our liberty, do we roll over and play dead? Well, I can only say — not me!

As citizens and as physicians we have two responsibilities. One, we must defend our freedom and by guarding it jealousy, help preserve liberty for all our countrymen. Two, we must maintain and work to improve the high quality of medical care we have established. It is my conviction both responsibilities are served by non-participation.

Well, you may ask, just what is this great and wonderful panacea? It is simply that we will continue to work only for our legitimate employers—our patients. Although not stated specifically in the law, the implication is plain, that the government has usurped our right to contract with patients 65 or over. This implication is strengthened and cloaked with decency when leaders of our profession proclaim participation to be the law of the land. Now, we know, and I think we have a responsibility to make sure our patients know, that the only thing anyone, patient or physician, is compelled to do is to pay the freight.

The honor of our profession is at stake. Over and over we have told our patients and our government that whenever and wherever a program such as Medicare is initiated it has resulted in the deterioration of the quality of medical care. The effect of the program is the direct opposite to its alleged and stated intent. I believe, and I think you agree, that anything that tends to lower the standard of medical care is evil.

Anything evil is unethical and immoral. Since we know the effect of this law to be evil—**participation in it is immoral.**

But, tell me, does the luster of "public money" headed our direction blind us to this conviction? Does a check from Washington suspend our ethics? Will the guilt, which accompanies such a retreat from integrity, find absolution at the White House? Having promised to provide the highest quality of medical care regardless of ability to pay, will we now direct those who can't pay to a program we have declared will harm them? This is a betrayal. And our patients know it. Nevertheless, there is a real possibility that the virtue of an honorable profession will be destroyed by following the dictates of political expediency.

Now, it has been suggested that we can protect our honor and our quality of medical care. We will help formulate rules and regulations which will tend to minimize the "baneful" effects of it and operate to "contain" the law. In my opinion, this constitutes a flight from reality. It contains the subtle suggestion that there can be some good in a program designed by cynical men whose only motivation is the acquisition of power. I do not believe this good exists. Further, it is folly to believe that any substantial mitigating of evil can be accomplished by cooperation with these men after all the expenditure of time and money employed to defeat them was in vain.

I cannot escape the conclusion that our honor and the welfare of our patients can be served only by non-participation.

As I said before, we have a responsibility as citizens to preserve freedom. Whether we like it or not, we are in the front ranks of this contest. Any freedom we lose diminishes the liberty of all other citizens. The contest of freedom versus slavery is not a spectator sport. Fighting on the side of freedom never has been, never will be, easy. Being a free American has never been easy. It wasn't easy at Valley Forge, Chateau Thierry, Iwo Jima or Bastogne. It isn't easy in Viet Nam today.

Even here and now in Illinois is isn't easy to be free. The siren songs of "free" Federal Aid with is velvet-gloved fist of control tempt us from every side. The difficulty to resist temptation increases as the ill-informed and irresponsible tell us the government owes us these things.

Being free will become more and more demanding. It will take guts. Those of us who refuse to subject our patients to the Medicare hoax will be designated as selfish, heartless and unpatriotic. Authorities in government and their mouthpieces will proclaim that all "good doctors" participate. Fair weather friends will abandon us. Ivory tower colleagues, many of them addicted to pap from the Federal breast, will heap scorn and ridicule upon us — but then — they really never understood us anyway.

Each of us must come to his own decision. **I** have. I will **not** prostitute my art, betray my patients or compromise my principles to curry political favor.

Non-participation will **not be easy.** It will **not be popular.** It will continue to be misunderstood. But it is characterized by qualities of integrity which attach themselves to no other action. It is **legal. It will maintain** private medicine. It will preserve the honor of our profession. **It will** promote **freedom in our land.**

ROBERT G. ENGLAND, M.D.
Carlinville, Illinois
Published by AAPS
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FEDICARE

(Clip and Save for Future Reference)

Robert M. Mayne, executive officer of the Bureau of Health Insurance, Social Security Administration, said there should be "no fear of extensive change in administrative processes involving physicians or provider institutions under the new medicare law."

He added, "The physician will determine for his patients, as he always has, the nature of services required and whether hospitalization or other institutional services are required."

The insurance carriers, he continued, will determine the amounts to be paid for physicians' services and other covered health services and will make payments for them.

Prof. Herbert E. Klarman, Johns Hopkins U., said he sees no reason to expect an attempt to extend medicare to the entire population "in the foreseeable future."

He said this opinion is based in part on the assumption that voluntary health insurance plans will be able to strengthen their benefit offerings to the under-65 age group because medicare will remove the costly burden of programs for the elderly.

AMA NEWS
November 1965

Scottish Teach-In Marks Troubles Of The GP

Britain's first teach-in devoted to the troubles of the general practitioner under the National Health Service was held here at Edinburgh University. Organized by the school's Department of Extra-Mural Studies in cooperation with members of the medical faculty, the six-hour event attracted more than 200 physicians, nurses, students, and members of the public.

Most of the discussion centered around the quality-and quantity- of medical care under the NHS, as well as a comparison of the NHS with the health services of other countries. Also discussed were hospital services, nursing, and medical education.

Some of the sharpest exchanges came when the former Secretary of State for Scotland, Arthur Woodburn, blamed the medical profession for many of the deficiencies of which they themselves were complaining. But some of the loudest cheers came when Thomas W. Hurst, Secretary of the Royal Edinburgh Infirmary, said that despite all criticisms from inside the profession, the National Health Service was a "first class service."

According to Mr. Hurst, it was vital that the three main parts of the service-general practice, hospital service, and local health and welfare services-be integrated. If anything was in danger of wrecking the NHS, he declared, it was the tripartite administrative structure that kept these three functions separate and cut off from each other.

Opening the proceedings, Dr. Richard Scott, Professor of General Practice at Edinburgh University, declared that any country that decides to grant its citizens free access to their personal physician is "asking for trouble." This, he said, is what Britain did when the NHS was inaugurated in 1948, and all of the Service's problems stem from that.

Said Dr. Scott: "We have come to the situation where the modern doctor can do a great deal more for his patient than was possible only a decade ago. This was coincided with extra demands from the patient, most of which the doctor is technically capable of solving."

The physician, he said, faces two dilemmas. One is the conflict between quantity and quality of medical care, the other the choice between complete individual freedom and subjection to some degree of planning.

Commenting on the growth of specialization, Dr. Scott noted that a medical specialty could advance in two ways: either by "binary fission"—one specialty becoming two—or by casting off some of its responsibilities and giving them to "the undifferentiated field of general practice." Hence, specialization could not advance without an adequate system of general practice to absorb the extra responsibilities.

Another problem, he said, is whether it is possible to practice without relation to other medical services, such as health visitors, social workers, medical officers of health. To work in isolation is a completely outmoded concept, but that is virtually the position of today's G.P., he declared, adding:

"There will have to be some erosion of the principle of the personal doctor and some erosion of the principle of personal choice on the part of both doctor and patient."

Dr. Peter M. Last, Department of Social Medicine, Edinburgh, told the audience:

"The National Health Service has institutionalized — I might say fossilized — a system of personal medical care." Whatever may be said about the American system, it has great diversity. In Australia, he went on, a system has been devised, depending on state subsidy of private insurance — which pleases most of the physicians and most of the patients most of the time. And it is more flexible than the British system.

"The British National Health Service works, but it creaks, and it does not satisfy most of the people most of the time."

Dr. F. Andrew Boddy, Aberdeen University and lately Research Associate at the New York City Department of Health, said that the American system is less a system than "a jungle of free enterprise." But, he added, there is a great deal of underpinning in the form of aid to the underprivileged. On the other hand the U. S. system could not always give the kind of individual care the patient needed.

"This is the kind of thing the National Health Services does provide and makes the present system a good deal superior to what is happening in America," he declared.

But Dr. Ekkehard von Kuenssberg, Edinburgh, a member of the G.P. team now negotiating with

the Minister of Health, said that strict comparisons between countries are impossible. One of the chief difficulties in the development of the NHS, he said, was that in 1948 the politicians said that patients must use the Service to the full. He added: "And, by God, you did."

One good result, it was noted by some speakers, was that physicians found a vast amount of untreated illness.

MEDICAL TRIBUNE AND MEDICAL NEWS
Vol. 7, No. 2

LETTER TO THE EDITOR:

In the August issue of **Southwestern Medicine** one of my fellow graduates of the University of Texas, a noble institution steeped in the legends of the past with such pre-eminent physicians as William Keiler, James Thompson, A. O. Singleton and a host of others, appealed for us to "accept the Challenge," "that we fit in as a necessity in any society," "that we can survive no matter what," etc.

The monument on Bunker Hill is not a monument to a British victory. It stands as a symbol of the end of British tyranny and the beginning of American freedom. The torch was lighted by American patriotism and adherence to principle.

I would ask my colleagues to consider carefully the fees paid the physician in Hungary, or Poland, or the U. S. S. R., or any of the countries where the Orwellian prophecy of 1984 arrived some years past with a paean of totally triumphant socialism. It was George Washington who said, "government is like fire — a wonderful servant but a dreadful master." There is no difference in the totalitarian concept regardless of the wishes of the physician caught up in the maelstrom he would rather "ride out" simply attending to patients and 'leaving politics to others." The fee for apathy and indifference is terror and slavery. Today the manacles and leg-irons are being forged for patient and physician alike and, "when freedom fails, what remains?"

As physicians we ignored the collectivist trends on all sides until our own professional status was threatened and then found ourselves in the corner without an exit. We can repeat that tactical maneuver of waiting, as our so-called "leaders" have asked, until the "chips are down" and repeat an exercise in futility evident at another Texas shrine — the Alamo. As God Almighty was their witness, not one of those brave men who fought for the right with backs to the wall ever sought a compromise with evil or thought of walking as slaves back into the Dark Ages. And yet our worthy colleague sings a siren song of ignoring evil and simply attending the sick while Doctor Ernesto "Che" Guevara and other collectivists "doctor sick nations."

True, we have a responsibility to the sick and yet the evidence points overwhelmingly to the superiority of medicine and our allied professions, as we have known it and them these many years — some longer than most — but imbued with the ideals and knowledge that ours was and is the finest system in the world. Examine the new drugs discoveries of the past 23 years and not a single one has come from the "collectivist camp."

This today is our testing time. Yours and yours alone is the decision. Yet the pages of that great book will be inscribed with it and the effect upon those billions enslaved and as yet unborn. The greatest Christian theologian of all time expressed an attitude for those of us who are by virtue of education, temperament and training more nobly suited for dissent. Paul said in his Second Letter to the Corinthians, "Be ye not unequally yoked together for what company hath righteousness with unrighteousness and what communion hath light with darkness?"

Shall we sit out a wake as long and as dark and dreary as this one for the American Republic and the peoples of the world while we consider fees of potatoes and quarters of beef?

Forbid it, Almighty God!

George S. Richardson, M.D.
306 W. Tilden St.
Roswell, New Mexico

SOUTHWESTERN MEDICINE
47: No. 1 (January) 1966


SAXON

1 common cold! I thought everything was a "virus" these days.

though he'd prefer a more exotic name for it, you know
e's suffering from an ordinary, old common cold. And,
e's congested. He'll breathe easier when you prescribe
ovahistine LP.

wo long-acting tablets in the morning and two in the
ening will provide around-the-clock relief by helping
keep congested air passages clear, thus enabling
ur cold patient to enjoy normal and free breathing.
his action of long-acting Novahistine LP helps restore
rmal mucus secretion and ciliary activity—physiologic
fenses against infection of the respiratory tract.
se cautiously in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Tell patients who operate machinery or motor vehicles that drowsiness may result.

Each Novahistine LP tablet contains: phenylephrine hydrochloride, 25 mg., and chlorpheniramine maleate, 4 mg.

NOVAHISTINE® LP

For relief of nasal congestion.

DOW **PITMAN-MOORE** Division of The Dow Chemical Company, Indianapolis



When tetracycline is indicated in these candidates for Candida...



New low-cost tetracycline/ antifungal therapy

Tetrex®-F

tetracycline phosphate complex –nystatin

Because new Tetrex-F (tetracycline phosphate complex-nystatin) is the most economical therapy of its kind that you can prescribe, it is a sound choice whenever tetracycline therapy is indicated in patients predisposed to monilial infections.

Who are these "candidates for Candida"?

1. diabetic patients
2. nonpregnant women with a history of recent or recurrent monilial vaginitis
3. elderly or debilitated patients
4. patients with a past history of moniliasis
5. patients on long-term tetracycline or corticosteroid therapy.

For these patients, Tetrex-F (tetracycline phosphate complex-nystatin) provides efficient tetracycline therapy against a broad range of infections *plus* protection against superinfection associated with the overgrowth of *C. albicans* in the G.I. tract.

Priced for savings

Tetrex-F (tetracycline phosphate complex-nystatin) is lowest in cost—priced 20% lower than most tetracycline/antifungal products.

BRISTOL THERAPEUTIC SUMMARY

For complete information consult Official Package Circular.

Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms, in patients with increased susceptibility to monilial infections.

Contraindications: The drug is contraindicated in patients hypersensitive to its components.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex (tetracycline phosphate complex). With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.

Usual Adult Dosage: 1 capsule q.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals.

Supply: Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin. Oral Suspension, 60-ml. bottle. Each 5 ml. contains tetracycline equivalent to 125 mg. tetracycline hydrochloride and nystatin, 125,000 units.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
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Many anxious patients need more than just calming. Stelazine®

brand of trifluoperazine

offers true tranquilization.



Sedative or muscle relaxant-type tranquilizers are often all that's needed for patients with temporary situational anxiety. But in the many patients whose anxiety presents a continuing problem these agents are limited by their generalized dulling effects.

'Stelazine' can attack anxiety directly without producing annoying dulling effects. On 'Stelazine', patients can react more normally to day-to-day stress yet remain alert, able to carry on their normal activities.

Contraindicated in comatose or greatly depressed states due to CNS depressants and in cases of existing blood dyscrasias, bone marrow depression and pre-existing liver damage. *Principal side effects,* usually dose related, may include mild skin reaction, dry mouth, insomnia, fatigue, drowsiness, dizziness and neuromuscular (extrapyramidal) reactions. Muscular weakness, anorexia, rash, lactation and blurred vision may also be observed. Blood dyscrasias and jaundice have been extremely rare. Use with caution in patients with impaired cardiovascular systems. Before prescribing, see SK&F product Prescribing Information.

SK&F Smith Kline & French Laboratories, Philadelphia

FDA WOULD ADD 17 DRUGS TO AMPHETAMINE-BARBITURATE CONTROLS

Proposal Based on Expert Committee Recommendations; 30 Days Allowed for Comments.

Food and Drug Administration is proposing to make 17 drugs in addition to amphetamines and barbiturates subject to the 1965 drug abuse control amendments. There were no surprises for the industry in the list of products to be included, although there probably will be some protests. The proposal was carried in the Federal Register for January 18, 1966. Interested parties have 30 days for submission of comments to the hearing clerk, Department of Health, Education, and Welfare, Room 5440, 330 Independence Avenue, S. W., Washington, D.C.

FDA has asked for comments on "any additional trade or other names that should be listed under the new law . . . as well as comments on any combination of drugs listed, with other drugs, which FDA should consider for exemption because of their lack of significant potentiality for abuse." The agency grouped the 17 drugs it wants included in the new controls into three classifications:

1. Drugs having a potential for abuse of their depressant effect on the central nervous system: glutethimide (Doriden), chlordiazepoxide (Librium), meprobamate (Miltown, Equanil, etc.), ethchlovynol (Placidy), chloral hydrate, diasepam (Valium), ethinamate (Valmid), methyprylon (Nodular), paraldehyde.

2. Drugs having a potential for abuse and habit forming because of their stimulant effect on the central nervous system: "d" and "dl" methamphetamine and their salts phenmetrazine hydrochloride (Preludin).

3. Drugs having a potential for abuse because of their hallucinatory effect: d-lysergic acid diethylamide (LDS-25), peyote, mescaline and its salts and dimethylrptamine (DMT), psilocyn, psilocybin.

FDA pointed out that the drugs in group 3 are those not legally obtainable in drug stores. It said most are available as investigational new drugs to be used only by qualified investigators in connection with plans of investigation reported to the government. Use of peyote "in bona fide" religious ceremonies by the Native American Church will be permitted, under the FDA's proposal. The FDA said it selected the 17 products for coverage under the most strict controls after receiving recommendations of a medical advisory committee that met in late December.

On announcing its intention to put the controls on the 17 drugs, FDA also reminded manufacturers, wholesalers, retail pharmacists and dispensing physicians of some of the requirements of the drug abuse control law, which went into effect on February 1, 1966. As of that date all producers and distributors, including pharmacists, are required to take an inventory of amphetamines, barbiturates and combinations of these drugs with each other, as specified by the law. Also, all manufacturers and distributors of these drugs are required to register with FDA, but pharmacists who do not carry on any wholesale or jobbing business in these drugs are exempt.

The agency added that as of that same date, manufacturers, distributors, pharmacists and "those physicians who maintain stocks of drugs and dispense them" are required to keep records on their production and distribution of the drugs for a period of three years, but ordinary business records are regarded as satisfactory by the government. Pharmacists must retain their purchase invoices and the prescriptions they have filed for these drugs. All records, including the initial inventory, must be made available to FDA inspectors on request. Proposed regulations relating to record-keeping and related matters were published in the Federal Register December 18, 1965.

An FDA final order published January 8, 1966,

exempts from the inventory and record-keeping requirements, until August 1, 1966, any of the drugs that may lawfully be sold over-the-counter without a prescription and amphetamines and barbiturates combined with other drugs (but not with each other). This action was taken, FDA said, after studies showed no evidence of significant abuse.

TUCSON OBSTETRICAL AND GYNECOLOGICAL SOCIETY

The Tucson Obstetrical and Gynecological Society was formed in March, 1954, for the express purpose of maintaining a high standard of medical practice in the community. The first president was William D. Carrell, M.D. Current officers of this Society are as follows: Gordon J. Hippert, M.D., President; Wayne Kuykendall, M.D., Vice President; Ruth Ewing, M.D., Treasurer; Robert Oliver, M.D., Secretary.

UA NAMES DR. MATTE TO HEALTH POST

The University of Arizona has selected Dr. Paul J. Matte, Jr. as new director of the Student Health Service.

Dr. Matte has practiced general and forensic medicine in Phoenix. He also has been assistant medical examiner for Maricopa County.

Before that, Dr. Matte was staff physician with Stanford University's Student Health Service in 1964 and early 1965 and he has been resident physician at the Santa Cruz County (Calif.) Hospital.

Dr. Matte holds an LL.B degree from the Stanford University School of Law as well as an M.D. degree from the University of Southern California School of Medicine and a B.A. degree from the University of Tennessee.

SOUTHWESTERN PREPARATORY SCHOOL HAS NEW DIRECTOR OF EDUCATION

Mrs. Ruth (Edward) Bartlett, R.N., became the new Director of Education for Southwestern Preparatory School for medical secretaries on February 14th, the start of the first spring course.

Mrs. Bartlett received her nurse's training from St. Luke's Hospital, Cleveland, and prior to coming to Arizona in 1959 had many years of nursing experience in Ohio, working in such fields as Public Health, Neuro-Psychiatry, Radiology, Surgery and private duty nursing.

As Director of Education for Southwestern Preparatory School she will instruct in Medical Terminology and Spelling, Medical Transcription, Correspondence and Office Management, Sterilizer Operation, taking blood-pressures, pulse and temperatures, etc., and many other patient-aid techniques.

Mrs. Bartlett is well-known in local medical fields, as prior to joining the school staff she worked as office nurse for several Phoenix doctors.

MEDICALLY ALLIED DRAFT CHANGED

Doctors, dentists and veterinarians have been joined by those in related fields, such as male nurses and pharmacists, who as fathers are subject to special draft callups.

In an executive order President Johnson changed the status of fathers in medically allied fields who were formerly deferred automatically in class III-A.

BOARD OF MEDICAL EXAMINERS– STATE OF ARIZONA

The Board of Medical Examiners of the State of Arizona, at a regular meeting held Saturday, January 8, 1966, issued licenses to practice medicine in the State of Arizona to the following doctors of medicine.

Norman E. Anderson, M.D. (P), 1930 E. 6th St., Tucson, Arizona.

Duncan W. Campbell, M.D. (S), 5th and Alvernon Streets, Tucson, Arizona.

Ricardo L. Camponovo, M.D. (PATH), Maricopa County General Hospital, Phoenix, Arizona.

Michael F. Cleary, M.D. (P), Geisinger Medical Center, Danville, Pennsylvania.

Mark S. Donovan, M.D. (R), Republic Building, Denver, Colorado.

Charles E. Eby, M.D. (R), Pima County General Hospital, Tucson, Arizona.

George R. Ellis, M.D. (PM), VA Hospital, Lexington, Kentucky 40507

Freeman P. Fountain, M.D. (PM-R), 5400 Gibson Blvd., S.E., Albuquerque, New Mexico.

Richard E. Galloway, M.D. (GP), 703 North Olive St., Casa Grande, Arizona.

Rodney Dale Gladhart, M.D. (GP), 4510th USAF Hospital (TAC), Luke ARB, Arizona.

Raymond P. Gorning, M.D. (I), Arizona State Hospital, Phoenix, Arizona.

Mary L. Graham, M.D. (PD-PH), 5332 North 61st Ave., Glendale, Arizona 85301.

Howard S. Gray, M.D. (P), Los Angeles County Hospital, 1200 North State St., Los Angeles, California 90033.

Edward M. Gross, Jr., M.D. (PD-GP), Maricopa County General Hospital, Phoenix, Arizona.

Billie R. Hardwick, M.D. (P), 303 University Towers, El Paso, Texas.

William E. Harrison, Jr., M.D. (ORS), 1410 East McDowell Road, Phoenix, Arizona.

John P. Holbrook, M.D. (I), 2430 East Sixth St., Tucson, Arizona 85719.

Stephen D. Kaster, M.D., 5104 W. Schubert Avenue, Chicago, Illinois 60639.

Richard A. Knowles, M.D. (OBG), Little Co. of Mary Hospital, Evergreen Park, Illinois.

Joel V. Levy, M.D. (OPH), 7202 North 11th Place, Phoenix, Arizona 85020.

Dail F. Lodge, M.D. (GP), Monument Valley Hospital, Mexican Hat, Utah.

Robert C. Lonergan, Jr., M.D. (OPH), 1716 Locust St., Starling, Illinois 61081.

Joseph B. McNally, M.D. (GP), 434 W. Gurley St., Prescott, Arizona.

Laurence S. Maynard, M.D. (PH), Dept. of Entomology, University of Arizona, Tucson, Arizona.

William F. Middleton, M.D. (GP), Arizona State Hospital, Phoenix, Arizona.

William M. Midgett, M.D. (OBG), Parkland Memorial Hospital, Dallas, Texas.

John F. Muxworthy, Jr., M.D. (ANES), 815 Stagecoach Road, S.E., Albuquerque, New Mexico.

Alice E. Palmer, M.D. (D), 810 David Whitney Building, Detroit, Michigan 48226.

Caddie L. Parker, M.D. (R), 1215 North Beaver St., Flagstaff, Arizona.

Donald K. Patterson, M.D. (I), Veterans Adm. Hospital, West Los Angeles, California.

Robert W. Peterson, M.D. (ALR), Los Angeles County Hospital, 1200 N. State St., Los Angeles, California.

Thomas R. Pfisterer, Jr., M.D. (GP), Medical Arts, Redfield, South Dakota 57469.

Jesse R. Rich, M.D. (NS), UCLA Medical Center, 10833 LeConte Ave., Los Angeles, California.

Wesley E. Romberger, M.D. (OBG), Good Samaritan Hospital, Phoenix, Arizona.

Michael C. Rost, M.D. (GP), MCAS, Yuma, Arizona.

Daniel I. Schildkraut, M.D. (GS), Veteran's Administration Hospital, Hines, Illinois.

Samuel A. Smith, M.D. (PD), Long Island Jewish Hospital, New Hyde Park, New York.

Guy V. Spinello, M.D. (GP), 71 W. Broadway, Hicksville, New York.

Duane L. St. Clair, M.D. (OBG), Maricopa County General Hospital, Phoenix, Arizona.

Paul H. Stevens, M.D. (GP), Arizona State Hospital, Phoenix, Arizona.

Robert V. Tate, M.D. (GP), Maricopa County General Hospital, Phoenix, Arizona.

Herman F. Van den Broeck, M.D. (I), Maricopa County General Hospital, Phoenix, Arizona.

Alexander B. Vial, M.D. (GS), Box 390, Springerville, Arizona.

Mary Louise O. Wensel, M.D. (P), 4232 East 5th St., Tucson, Arizona.

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Dr. Victor Gilbertson will speak on "Early Detection of Cancer and Improved Diagnosis."

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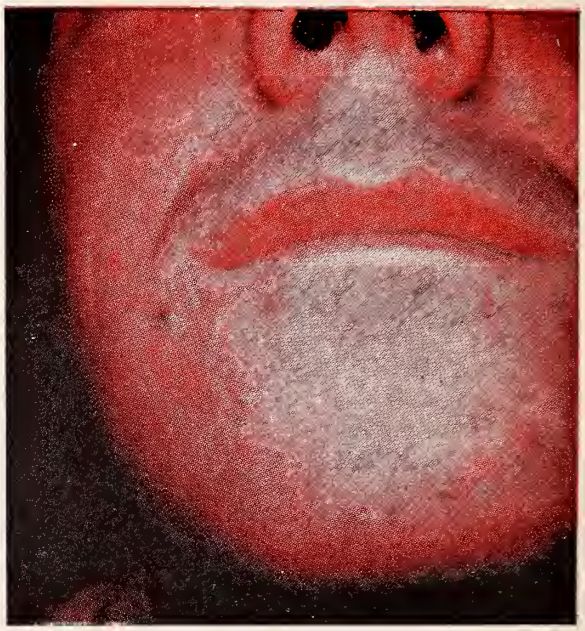
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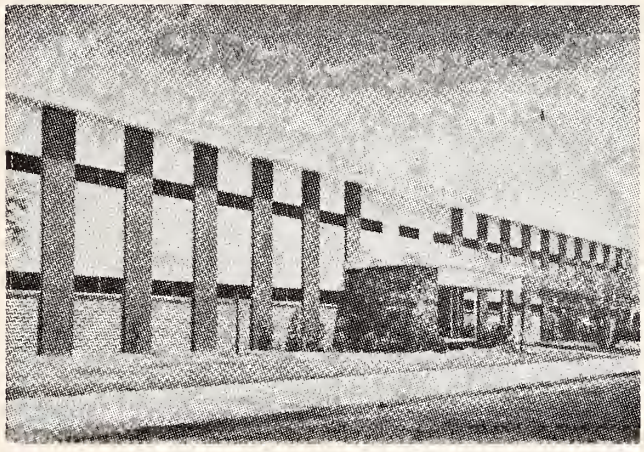
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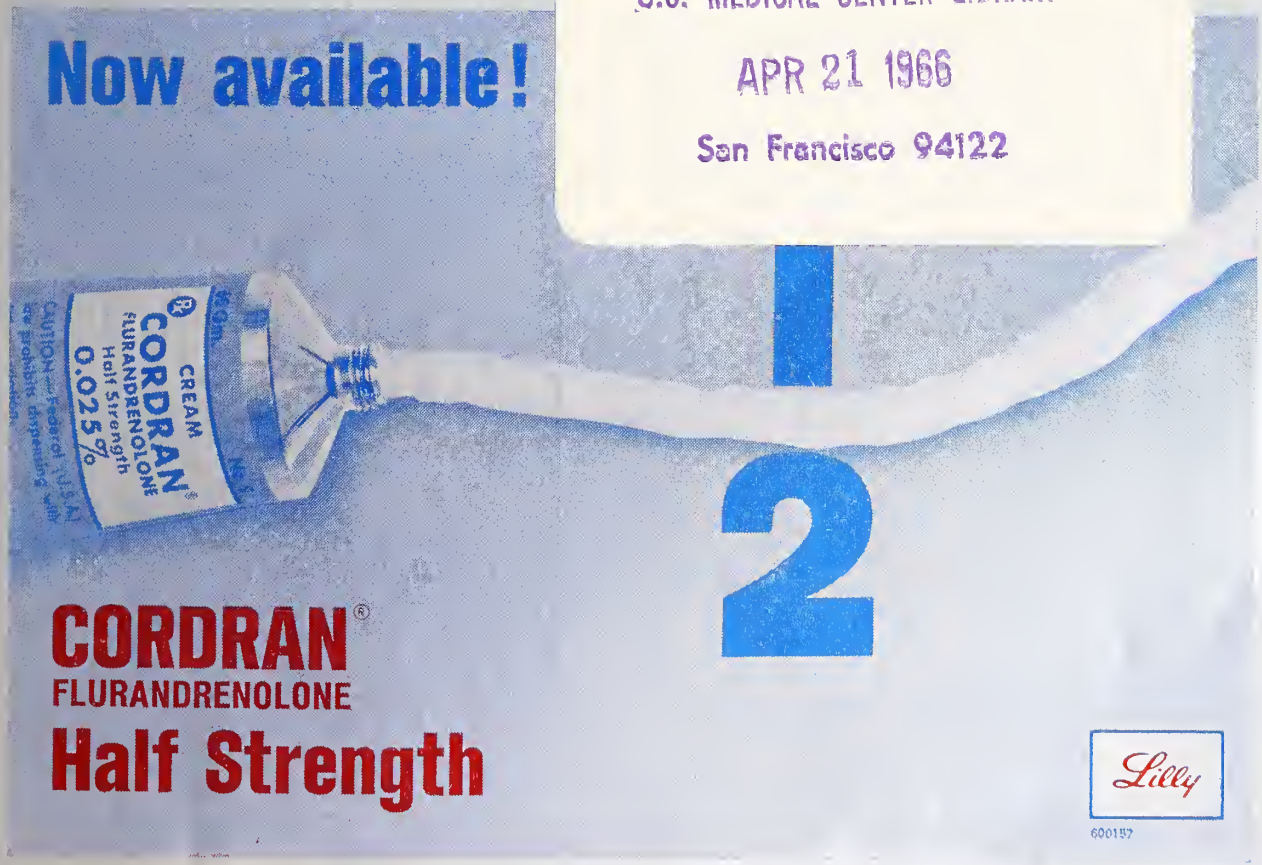
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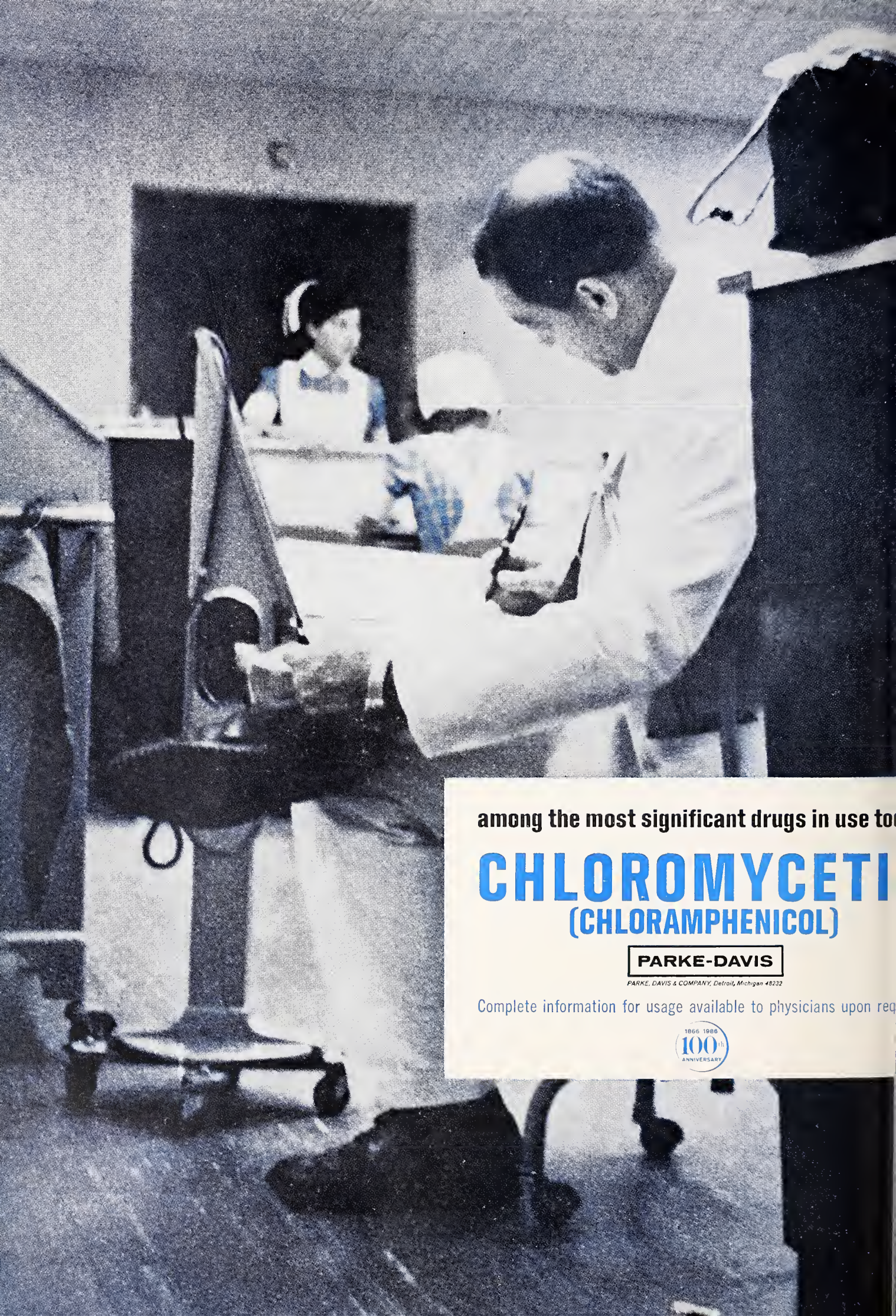
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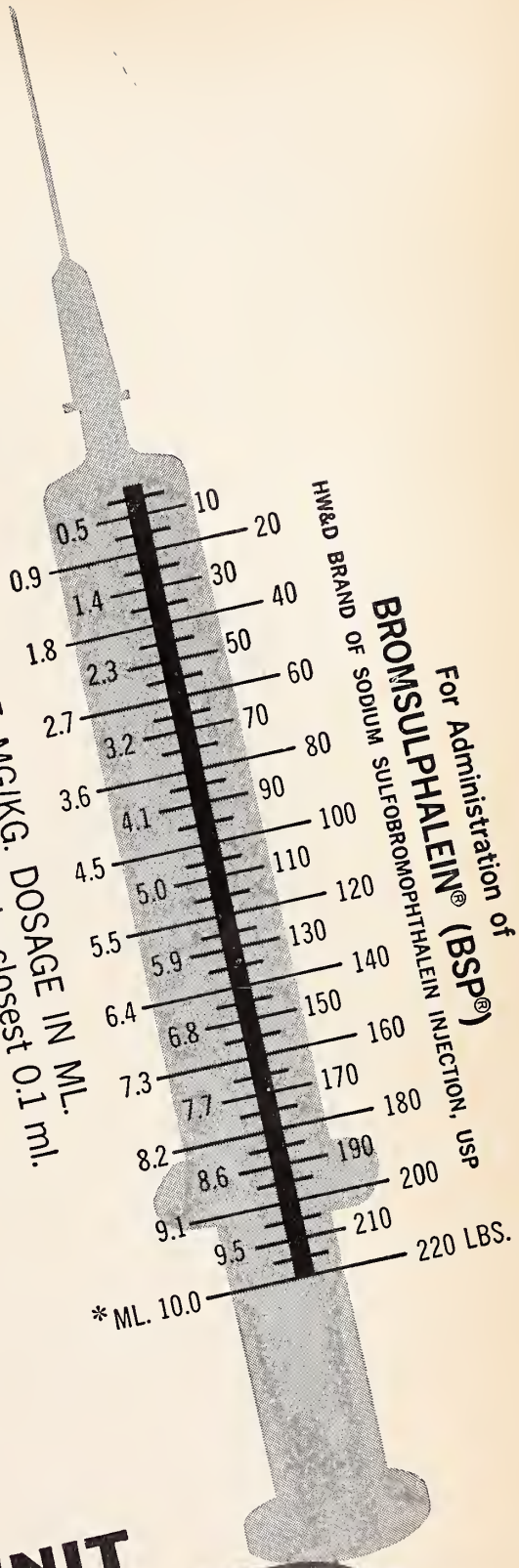
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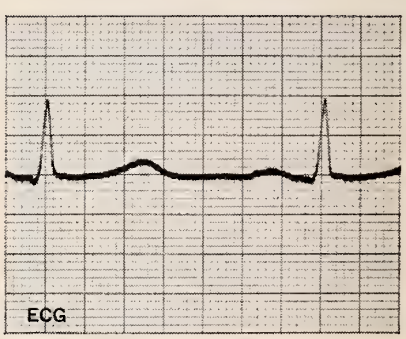
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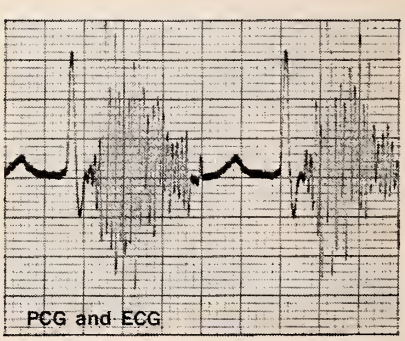
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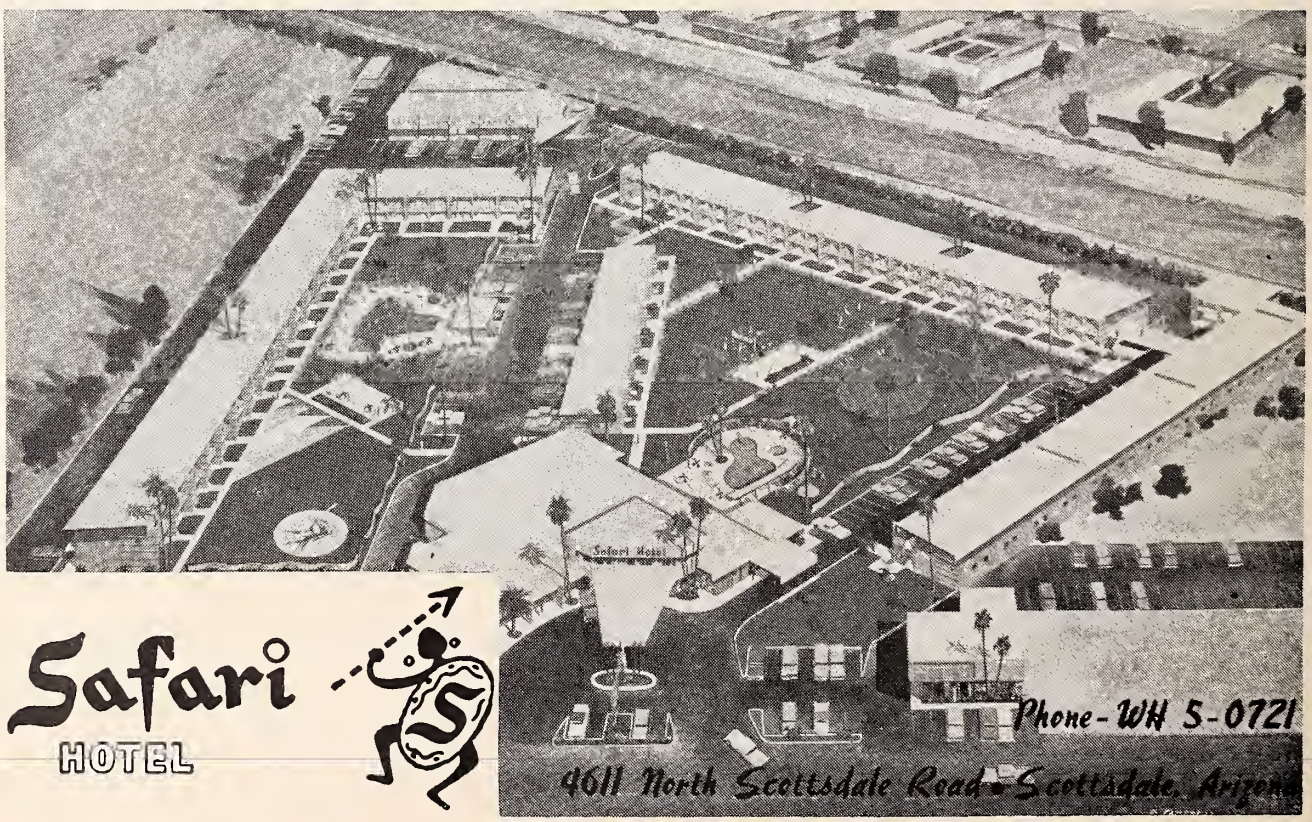
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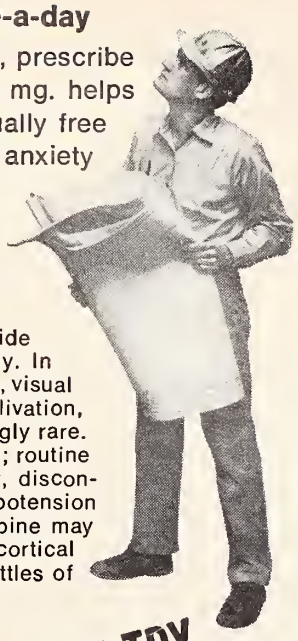
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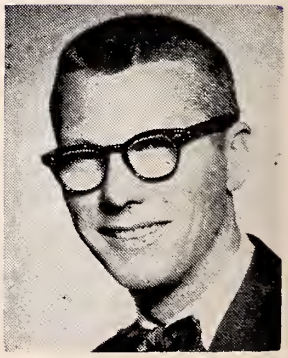
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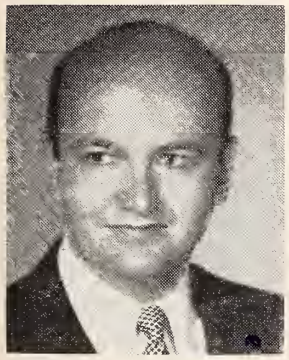
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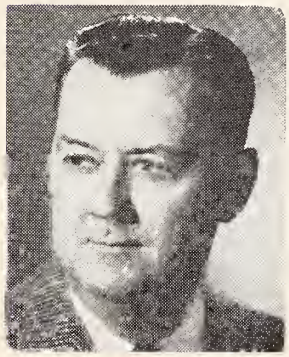
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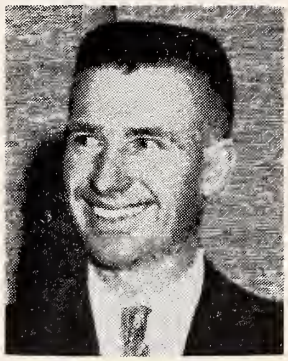
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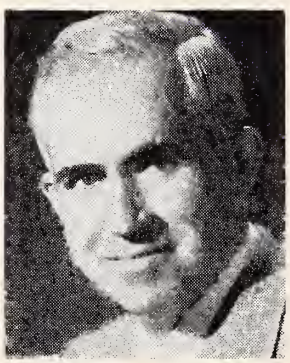
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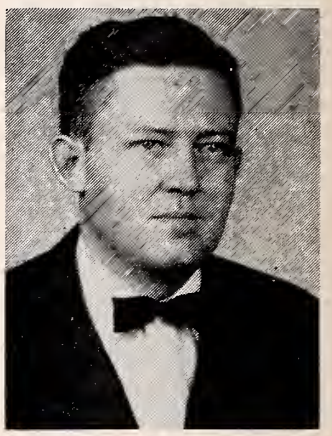


Dr. Ashton B. Taylor
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NORTHWESTERN AND NORTHEASTERN DISTRICTS

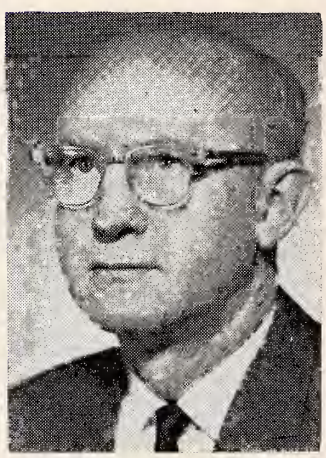


Dr. Hugh Dierker
Northwestern District



Dr. Robert J. Haley III
Northeastern District

SOUTHWESTERN AND SOUTHEASTERN DISTRICTS

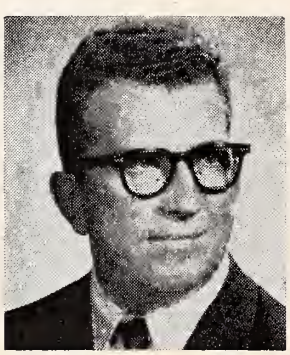


Dr. Deward G. Moody
Southeastern District



Dr. Howard W. Finke
Southwestern District

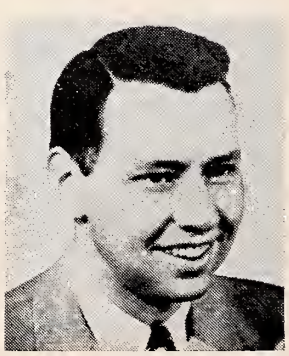
SOUTHERN DISTRICT



Dr. Richard L. Dexter
Tucson

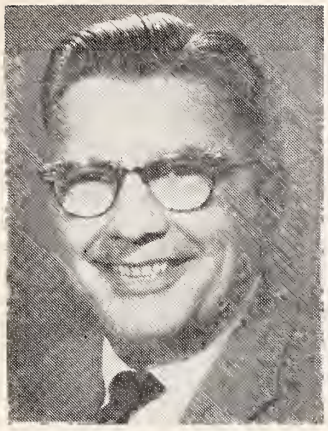


Dr. P. G. Derickson
Tucson

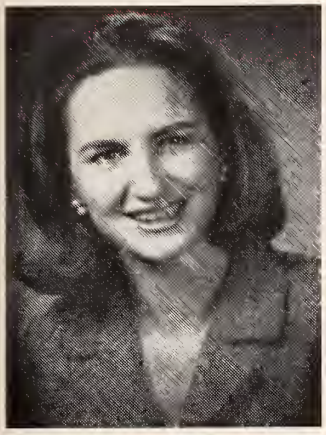


Dr. Hermann S. Rhu, Jr.
Tucson

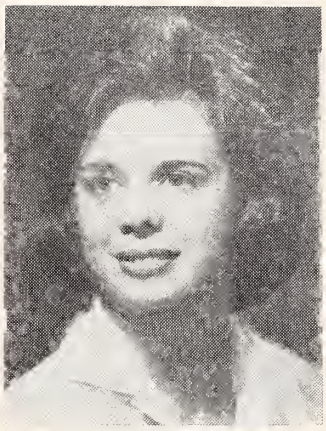
Your Staff



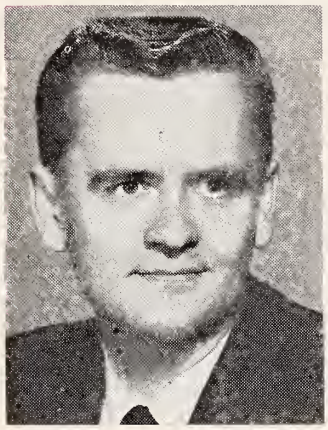
Mr. Robert Carpenter
Executive Secretary



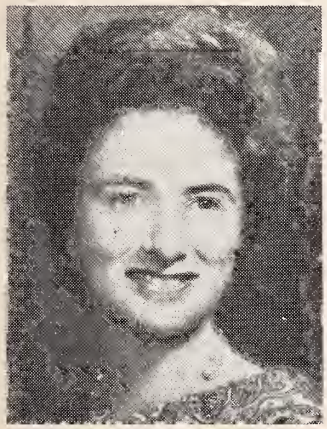
Miss Valerie Valliquette
Secretary



Mrs. Evelyn Kuebler
Secretary and
Editorial Assistant



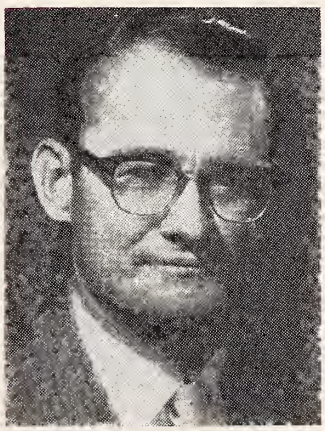
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Department of Surgery



Edward L. Compere, M.D.
Department of Orthopaedic Surgery



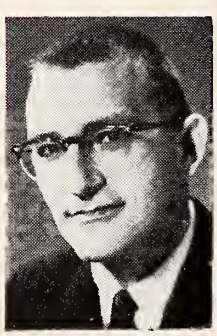
Ronald R. Greene, M.D.
Department of Obstetrics and Gynecology



Robert B. Lawson, M.D.
Department of Pediatrics



Jules H. Masserman, M.D.
Department of Psychiatry



Sheldon S. Waldstein, M.D.
Department of Medicine



Harvey White, M.D.
Department of Radiology



Samuel J. Zakon, M.D.
Department of Dermatology

Official Program

TUESDAY — APRIL 26, 1966

6:00 P.M. BOARD OF DIRECTORS Dinner Lanai Room
8:00 P.M. Board Meeting Convention Center

WEDNESDAY — APRIL 27, 1966

9:00 A.M. HOUSE OF DELEGATES — First Session Convention Center
10:00 A.M. GENERAL SESSION — Opening Exercise Convention Center
Call To Order — Arnold H. Dysterheft, M.D.
Invocation and Memorial Service
Rev. Fletcher H. Scharer, First Methodist Church, Phoenix
Welcome — Maricopa County Medical Society, Ray Fife, M.D., President
Response — Yavapai County Medical Society, Daniel Bright, M.D.
Introduction of Distinguished Guests, Arnold H. Dysterheft, M.D.
Honorable Samuel P. Goddard, Governor
Mayor of Scottsdale
Ernest B. Howard, M.D., Assistant Vice President, A.M.A.
Introduction of Incoming President — Arnold H. Dysterheft, M.D.
Presidential Address — Paul B. Jarrett, M.D.
10:30 A.M. Intermission Visit the Exhibits
11:00 A.M. BLUE SHIELD — Annual Corporation Meeting, First Session Convention Center
12:30 P.M.- Annual Golf Tournament Century Country Club
(pay green & cart fees at the club), 56th St. & Shea Blvd.
1:30 P.M. ArMA Articles-By-Laws Reference Committee Patio Conference Room
2:00 P.M. ArMA Resolution Reference Committee Patio Conference Room
3:00 P.M. Film: "One Who Heals" Convention Center, Room A1
3:00 P.M. Annual Bowling Tournament Frontier Lanes
4:00 P.M. Blue Shield Reference Committee Kudu Room
7:00 P.M. RECEPTION Poolside
8:00 P.M. CHUCK WAGON DINNER Poolside
Western Music, P-S Ranglers; Square Dancing, Valley of the Sun Squaredancers (demonstration AND participation) Dress: "WESTERN" or Informal
(Admission By Ticket Only)

THURSDAY — APRIL 28, 1966

7:00 A.M. Breakfast French Quarter
7:30 A.M. Panel Discussion French Quarter
"Recent Advances in the Diagnosis and Management of Arthritis, Rheumatism and Gout"
Moderator — Sheldon Waldstein, M.D. — Discussants, Edward L. Compere, M.D., Harvey White, M.D.
9:15 A.M. SCIENTIFIC SESSION Convention Center
"Review of Mammary Carcinoma — Radical Versus Conservative Surgical Therapy"
John M. Beal, Jr., M.D.
Herbert J. Louis, M.D. Moderator
9:45 A.M. SCIENTIFIC SESSION Convention Center
"Respiratory Infections in Children" — Robert B. Lawson, M.D.
Robert T. Phillips, M.D. Moderator
10:15 A.M. Intermission Visit the Exhibits
10:45 A.M. SCIENTIFIC SESSION Convention Center
"Uses and Abuses of Steroids" — Sheldon S. Waldstein, M.D.
Harry E. Thompson, M.D. Moderator
11:15 A.M. SCIENTIFIC SESSION Convention Center
"Progress in Spinal Surgery" Edward L. Compere, M.D.
Ray Fife, M.D. Moderator

THURSDAY — APRIL 28, 1966

12:00 NOON SPECIALTY LUNCHEON MEETINGS
American College of Surgeons, Arizona Chapter French Quarter, Room 1
John M. Beal, Jr., M.D., Guest Speaker
Arizona Chapter, American Academy of General Practice
Business Meeting Kudu Room
Disaster Medicine Subcommittee French Quarter, Room 3
Wendell A. Butcher, M.D., Guest Speaker
1:45 P.M. SCIENTIFIC SESSION Convention Center
"Practical Office Procedures in Dermatologic Diagnosis and Treatment"
Samuel J. Zakon, M.D.
Ashton B. Taylor, M.D. Moderator
2:15 P.M. SCIENTIFIC SESSION Convention Center
"Newer Concepts in Contraception" — Ronald R. Greene, M.D.
Robert A. McCulley, M.D. Moderator
2:45 P.M. Intermission Visit the Exhibits

Official Program

3:15 P.M. SCIENTIFIC PANEL DISCUSSION Convention Center
"Medicare"
William J. Moore, M.D. Moderator
Commissioner, Arizona State Department of Health
Frederick J. Brady, M.D. Discussant
Director, Pima County Health Department
W. A. Brewer, M.D. Discussant
Chairman, Medical Advisory Committee Kerr-Mills Program
A. B. Colyar, M.D. Discussant
Special Assistant to the Chief, Div. of Medical Care Adm., Public Health Service, Washington, D.C.
John C. Foster Discussant
Executive Director, Arizona Blue Shield
Arthur E. Hess Discussant
Director, Bureau of Health Insurance Social Security Adm., Baltimore, Md.
Ernest B. Howard, M.D. Discussant
Assistant Vice President, A.M.A.
John F. Richardson Discussant
Regional Social Security Commissioner, San Francisco, California

7:30 P.M. PRESIDENT'S BANQUET Convention Center
Dr. Kenneth McFarland, General Motors Company, Guest Speaker

FRIDAY — APRIL 29, 1966

7:00 A.M. Breakfast Kudu Room

7:30 A.M. Panel Discussion Kudu Room
"Day to Day Office Management of Nervous People"
Jules H. Masserman, M.D. Moderator
William B. McGrath, M.D.; William F. Sheeley, M.D. Discussants

9:15 A.M. SCIENTIFIC SESSION Convention Center
"Psychopathology of the Unwashed" (Beatniks, kooks and pseudo-intellectuals)
Jules H. Masserman, M.D.
Hubert R. Estes, M.D. Moderator

9:45 A.M. SCIENTIFIC SESSION Convention Center
"Vascular Contrast Studies in Radiologic Diagnosis" — Harvey White, M.D.
Mayer H. Nathan, M.D. Moderator

10:15 A.M. Intermission Visit the Exhibits

10:45 A.M. SCIENTIFIC SESSION Convention Center
"Detection and Fate of Epithelial Abnormalities of the Cervix"
Ronald R. Greene, M.D.
Zeph B. Campbell, Jr., M.D. Moderator

11:15 A.M. SCIENTIFIC SESSION Convention Center
"Pitfalls of Thyroid Function Tests" — Sheldon S. Waldstein, M.D.
Donald K. Buffmire, M.D. Moderator

12:00 NOON SPECIALTY LUNCHEON MEETINGS French Quarter, First Room
American College of Chest Physicians, Arizona Chapter
Arizona Section — American College of
Obstetrics and Gynecology Convention Center, Room A1
Ronald R. Greene, M.D., Guest Speaker
Arizona Psychiatric Society French Room, Third Room
Jules H. Masserman, M.D., Guest Speaker

1:45 P.M. SCIENTIFIC SESSION Convention Center
"The Effects of Drugs on the Newlyborn Child" — Robert F. Lawson, M.D.
Louise W. Bewersdorf, M.D. Moderator

2:15 P.M. SCIENTIFIC SESSION Convention Center
"Management of the Lumpy Breast" (When to biopsy) — John M. Beal, Jr., M.D.
John R. Green, M.D. Moderator

2:45 P.M. Intermission Visit the Exhibits

3:15 P.M. SCIENTIFIC PANEL DISCUSSION Convention Center
"Trends in Nursing Care"
Dermont W. Melick, M.D., Moderator — John M. Beal, Jr., M.D.; Gladys Sorenson, Ed.D., R.N.; Bette Clemons, R.N.; Vellamo Tikkala, R.N. — Discussants

SATURDAY — APRIL 30, 1966

8:00 A.M. HOUSE OF DELEGATES — Second Session Convention Center

10:00 A.M. Intermission

10:30 A.M. BLUE SHIELD — Second Session Convention Center

12:00 NOON SPECIALTY LUNCHEON MEETINGS
Arizona Pediatric Society Lanai Room
"Over Treatment in Children" Robert B. Lawson, M.D., Guest Speaker



Mrs. Hubert Estes
President



Mrs. Robert G. Delph
President-Elect

WOMAN'S AUXILIARY

to the

Arizona Medical Association

36th Annual Meeting

Official Program

General Chairman: Mrs. Daniel Cloud

Co-Chairman: Mrs. Carl Nau

Honorary Chairman: Mrs. Paul B. Jarrett

Hostess Auxiliary: Maricopa County Medical Society

Wednesday, April 27, 1966

9:30 A.M. Hospitality Room Room 154

9:30 A.M. Student Nurse Loan Committee Patio Conference Room
Mrs. Mayer Hyman

1:30 P.M. Finance Committee Meeting..Room 155
Mrs. Max Costin

1:30 P.M. Nominating Committee Meeting Room 153
Mrs. Richard B. Johns

2:30 P.M. Pre-Convention State Board Meeting Lanai Room
Mrs. Hubert R. Estes

7:00 P.M. Reception Poolside

8:00 P.M. Chuck Wagon Dinner Poolside
Dress: "Western" or informal

Thursday, April 28, 1966

9:00 A.M. Hospitality Room Room 154

9:00 A.M. Continental Breakfast Kudu Room

9:30 A.M. FIRST GENERAL SESSION.Kudu Room
Welcome — Mrs. Daniel T. Cloud
County Presidents' Reports
Nominating Committee Report
Election of Officers
In Memoriam
Program Workshop and Discussion

11:30 A.M. Recess of First General Session

11:30 A.M. New Executive Board Meeting Kudu Room
Mrs. Robert G. Delph

12:00 P.M. Luncheon and Fashion Show....Poolside

2:30 P.M. Art Museum Tour — Assemble in Hospitality Room Room 154

7:30 P.M. President's Banquet....Convention Center

BE SURE TO VISIT THE HOBBY EXHIBIT IN THE CONVENTION CENTER HALL OF EXHIBITS

Friday, April 29, 1966

9:00 A.M. Hospitality Room Room 154
Visit the Hobby Exhibit
Golf (Optional) — Inquire Hospitality Room
Bridge (Optional) — Inquire Hospitality Room

11:15 to 11:30 A.M. Transportation from Safari Hotel to Mountain Shadows Hotel

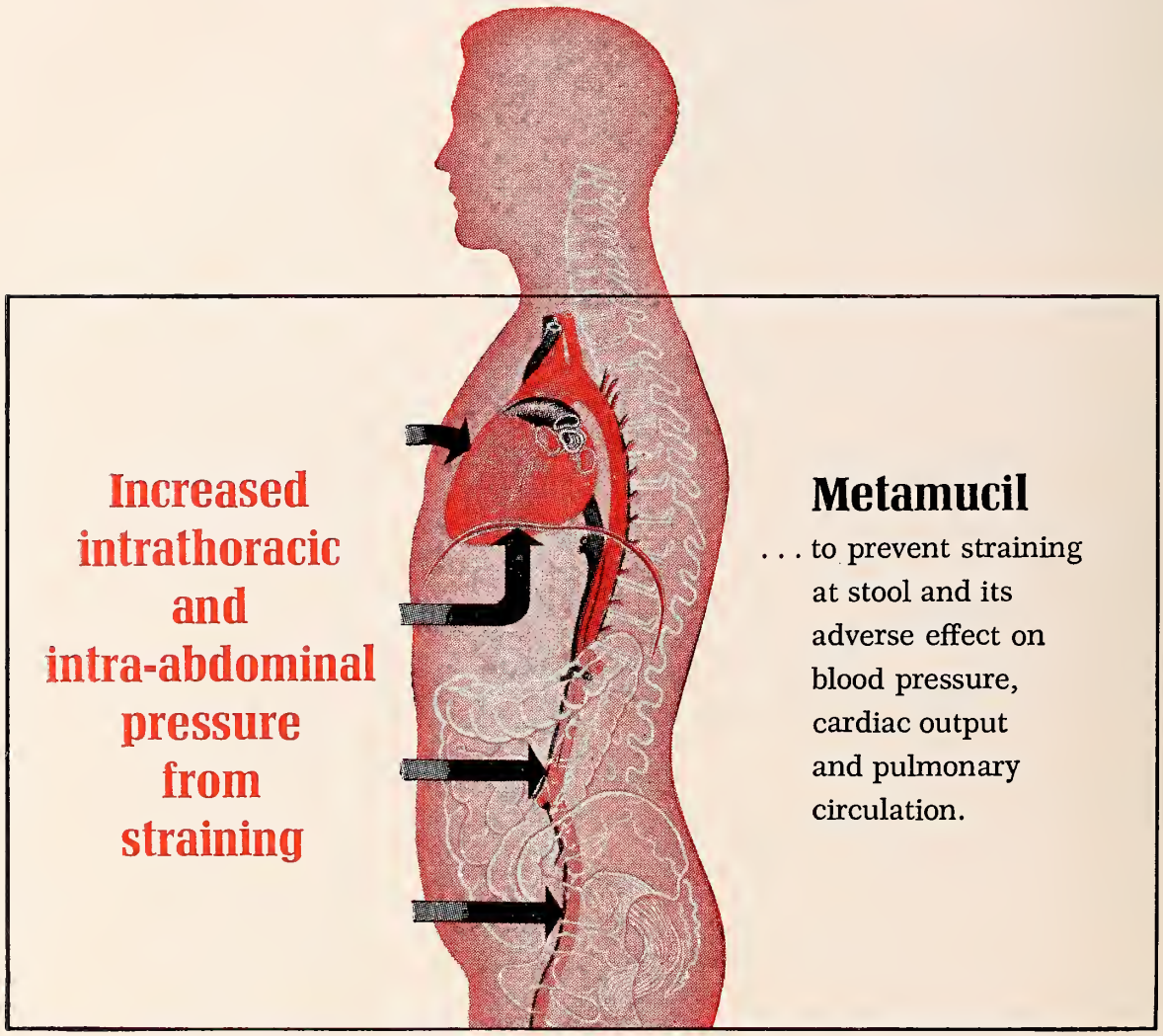
12:00 Noon Luncheon Mountain Shadows Hotel

SECOND GENERAL SESSION ...Mountain Shadows Hotel
President's Report
Address by National President
Mrs. Richard Sutter
Installation of Officers
Acceptance — Mrs. Robert G. Delph
Adjournment of Thirty-sixth Annual Meeting
Post Convention Board Meeting

Hobby Exhibit . . . Booths 47, 48 & 49 Convention Center

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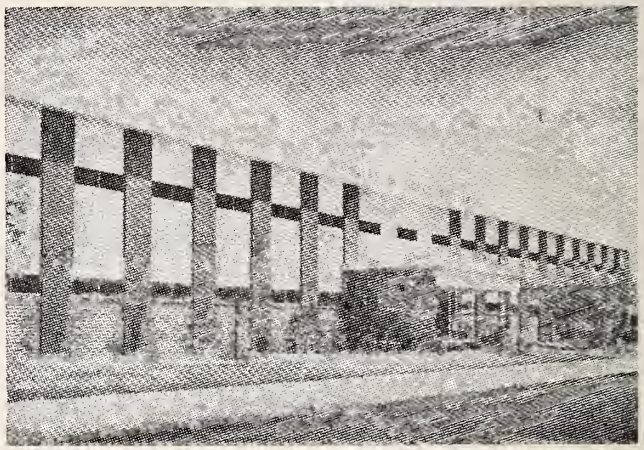
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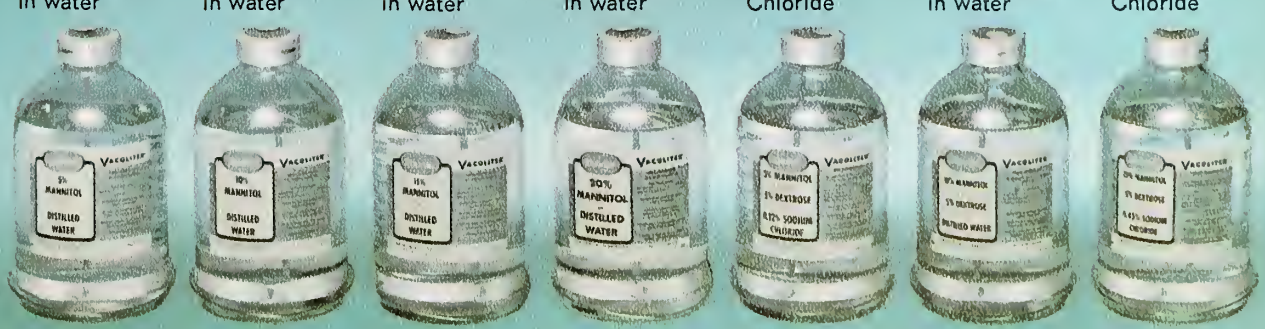
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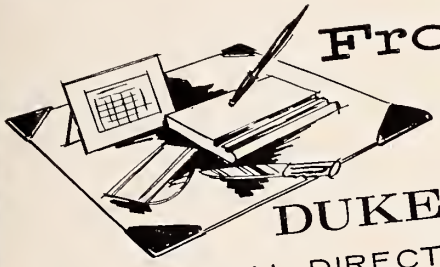


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ISOLYTE E, Extracellular Replacement in Water. For replacement of intravascular, interstitial, transcellular losses other than gastric	—	140	10	5	3	—	103	—	47	8	—	10	320
ISOLYTE E, with 5% Dextrose	50	140	10	5	3	—	103	—	47	8	—	180	570
ISOLYTE G, Gastric Replacement with 10% Dextrose	100	63	17	—	—	70	150	—	—	—	—	340	800
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DUKE GASKINS, M.D.

MEDICAL DIRECTOR, HBA LIFE INSURANCE CO.

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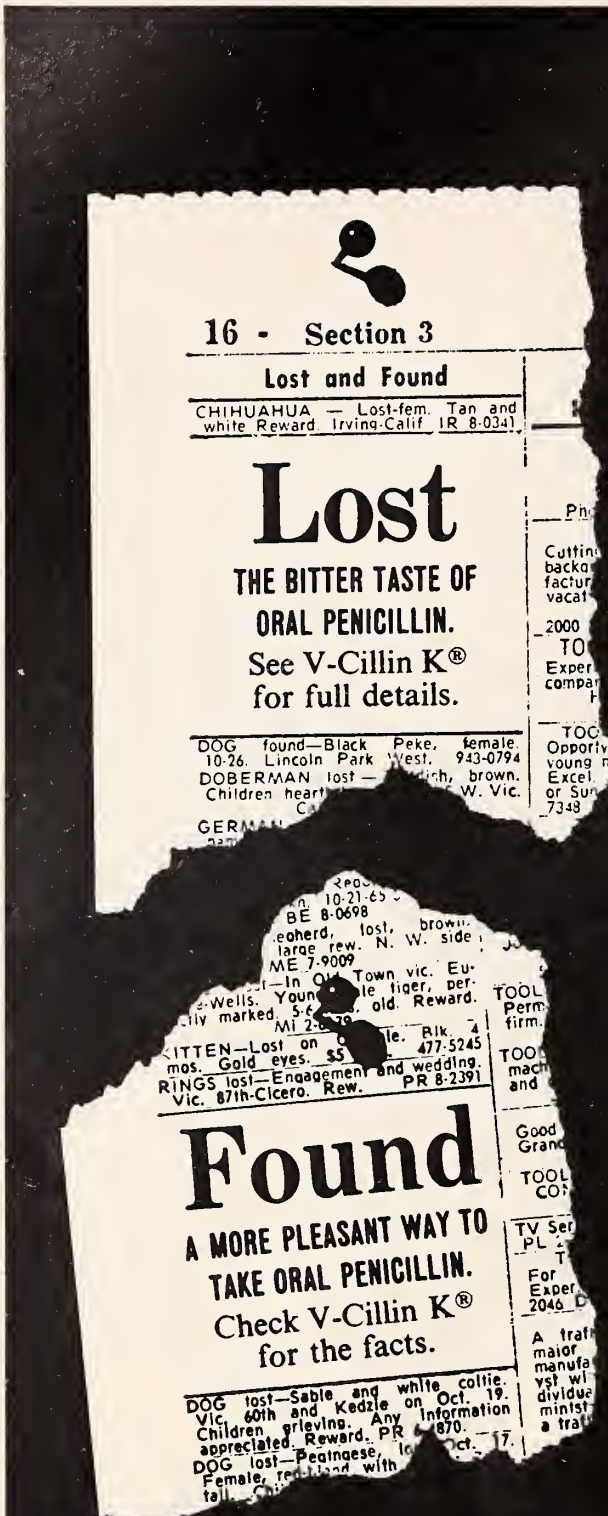
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DRY GULCH JAKE

Alias John W. Kennedy, M.D.

WITH the establishment of a medical school at the University of Arizona in Tucson, the following notes concerning an eminent Tucson physician, who met his untimely death on the streets of that city, hold some interest.

This is based upon newspaper accounts. I am indebted to Mr. Joseph Miller, of the Library and Archives, Capitol Building, Phoenix, for the material.

One of the earliest news items from the Weekly Arizona Miner (Prescott), March 20th, 1869, states: "January 20th, Lt. Guthrie, sixty-two soldiers, three guides with an interpreter, accompanied by Acting Assistant Surgeon Handy and his wife, Mrs. Handy, all under the command of Major Perry, started from here with strong spirits and a coyotero Indian called Phillippi, who said he would take them into Cachie's (Cochise) camp. After fourteen days hard tramp they reached the Dragoon mountains, at which place the lady got unwell at night. In the fuss to get some mustard, the pickets became alarmed and commenced firing one on another, but no harm was done and the mustard was found. The guide said the Indians were near at hand, but the snow was deep and the night dark and they concluded to make camp." This account further relates that later they did contact Cochise and some of the conversation is recorded.

Phoenix, Arizona

Cochise, "You mean you came to kill me or any member of my tribe and that is all your visits mean to me. I tried the American's way once and they broke the treaty first, the officers I mean; this was at the Pass (Apache). I will go with you into Goodwin to talk with you, after I hear how you treat Indians there. I will send in two of my Indians who will let me know (he did send in two squaws). I lost nearly one hundred of my people within the last year principally from sickness. The Americans killed a good many. I have not a hundred Indians now, ten years ago I had over a thousand."

Cochise is described in this newspaper account as "about 6 foot, 3 inches tall, strongly muscled with mild prominent features, hooked nose and looks to be the man that means what he says, age is beginning to tell on him. He is now about 50 years old."

There follows two accounts of the beginning of Dr. Handy's violence.

"Word was received at Ft. Whipple last week, that Dr. J. C. Handy, contract surgeon at Camp Thomas in the Eastern part of the country, had shot and killed Mr. Hughey, a sutler at the post. A woman, we are told, was at the bottom of the affair." This was related by the Weekly Arizona Miner (Prescott), December 10, 1870; another account states, "Dr. Handy who had difficulty which had resulted in the death of a man at Camp Thomas has returned as far as possible

with Lt. Cushing. The doctor came here to give himself up but found that the courts had no jurisdiction so he goes on to Yavapai County. His actions are considered commendable." Arizona Citizen (Tucson) December 10, 1870.

Nothing more in these newspaper accounts about the activities of Dr. Handy until a note in the Arizona Citizen (Tucson), August 12, 1871, stated Dr. J. C. Handy had opened an office on the Church Plaza and his professional card appeared in the Citizen, the same issue.

In 1871, in the Arizona Citizen, various notes are found concerning Dr. Handy. "Saturday last, Governor Safford, Dr. Handy and a few others left for a trip in the mountains toward the San Pedro river. They returned on Monday evening and reported finding some large veins of Quartz in a field for prospecting." Another note from the Board of Supervisors, Pima County proceedings: "Dr. J. C. Handy's report as County physician was received whereby it appears that six patients in the county jail and several other persons outside have received attention. Troy and O'Neil, hospital patients, were treated; the former was cured and the latter died October 23 from the effects of an abscess of the liver."

Then on March 23, 1872, The Arizona Citizen (Tucson) records an incident which could well be the first suspicion of malpractice in the Territory. "Early this week Manuela Bosel became ill. She had called Dr. Jacinto Gierdo who did his work so thoroughly that the woman died on Wednesday. Suspicions of false treatment led to a post mortem examination of the body under the direction of coroner Thayer and a jury assisted Dr. Handy, and the verdict was that the death was caused by a probable malpractice. Upon this a warrant was issued, the doctor brought before Justice Myers who examined the case and found cause to commit him to jail in the default of $2,000 bail. Unless something hereafter appears to discredit the testimony given, Dr. Gierdo is surely a dangerous man as a physician and nothing but the charitable plea of insanity ought to shield him from severe punishment. In such event, he should be deprived of his liberty to prevent others falling victims to his practice. The country is too full of sane quacks and thousands of people suffer from their criminal work."

In October, 1873, Dr. Handy was reported as among "a group of substantial citizens listed as engaged in the actual work of prospecting, developing or procuring patents to mine along the Gila." Further notes about his interest in prospecting and mining are recorded in the Arizona Citizen (Tucson) in 1874 and 1875.

To backtrack, the following note occurred in the Arizona Citizen (Tucson), July 19, 1873, "In the matter of the care of the indigent sick, proposals were received and read from Drs. C. H. Lord, J. A. Calendar and J. C. Handy, and it was decided to accept the latter, his bid being the lowest. For instance, attendance upon the indigent sick of the county and upon the sick in the county jail, $45.00 per month and for each additional one $50.00 per month. The contract with Dr. Handy is to commence August 1, 1873, and to continue for one year. A bond with penalty of $1,000 is to be given to insure the faithful performance of the contract as stated" — Board of Supervisors proceedings, Pima County.

Dr. Handy apparently became a substantial and respected citizen of the community and according to a communication from J. Byron McCormick, advisor to the Board of Regents of the University of Arizona, the following is quoted, "The records of the Board of Regents show that a John C. Handy (presumably Dr. J. C. Handy) was a member of the board from the latter part of 1886 until 1888. In fact he served during the period of Chancellor of the University of Arizona, and as such was ex officio president of the Board of Regents. The Arizona Territorial Assembly, in 1885, established the University of Arizona and prescribed that the Board of Regents should consist of six members appointed by the governor of the territory and two ex-officio members, a Superintendent of Public Instruction and the Secretary of the Territory. The Act further prescribed that the Board of Regents should elect a Chancellor of the University who should be the ex-officio President of the Board of Regents. It was to this office that John C. Handy was elected on November 27, 1886, according to the minutes of the meeting of the Board of Regents of that date. The last mention of his attendance at a Board of Regents meeting was at a meeting of January 31, 1888. Perhaps I should say that this

was during the planning stage of the University before the institution was in actual operation. It was not until 1891 that the University was open to students." Now Dr. Handy did indeed meet a violent end and the following is based on excerpts of newspaper accounts which were written at the time and are quoted more or less verbatum from the Arizona Daily Star, Tucson, September and October, 1891.

"At 12 o'clock noon yesterday a shot rang out at the corner of Church and Pennington. A representative of the Star hastened to the spot and found that Dr. J. C. Handy and Francis J. Henney were engaged in a deadly struggle at a point near the intersection of these streets. Both parties were on the ground, both had hold of the same pistol and were trying to take it from the other. A crowd soon gathered and after some difficulty the officers secured the pistol in controversy. When the parties were separated, it was discovered that Dr. Handy was shot in the left side. He was taken to his office where examination was made. His shirt was powder burned which showed the pistol was held close to the body when it was fired. The ball entered right below the ribs and passed down to the base of the back bone.

A herdick was secured and he was taken to his rooms on Main street where all the physicians in the city tended their services and Dr. Goodfellow of Tombstone was telegraphed for. The Southern Pacific sent a special engine to this place. Dr. Goodfellow arrived last night at 9:00 p.m. and was directly driven to Dr. Handy's rooms.

Soon after the unfortunate affair, Mr. Henney surrendered himself to the authorities and was released on $6,000 bail.

Last night Dr. Goodfellow of Tombstone, Drs. Phenner, Spencer and Green of this city, held a consultation with reference to the doctor's condition and agreed that there was no doubt but what the intestines were perforated by the bullet and there was hardly a ray of hope for his recovery. They recommended a surgical procedure and this was done. Accordingly the patient was placed under chloroform anesthesia and the operation begun at 10:20 p.m. An incision was made in the left side about seven inches long, the entrails taken out, which proved to be perforated more than a dozen places. There was also a large amount of blood in the cavity of the stomach caused by the internal hemorrhage which was removed. Just as the operation was completed and the last stitch being taken, Dr. Handy expired without a struggle at 1:00 o'clock in the morning." (The operation was a success even in those early days but the patient died anyway.)

At the inquest, Dr. Goodfellow testified as follows: "I am a physician, knew Dr. Handy, was summoned to see him, found him suffering from a gunshot wound in the abdomen. The ball in its course had cut many intestines, an operation was decided upon and I performed it. I opened his belly, sewed up the intestines and washed out the blood. He died from hemorrhage caused by gunshot wound."

Later Dr. Goodfellow is further quoted not at the corner's inquest but apparently by a reporter who interviewed him, "There were 19 perforations of the intestines, but not withstanding this fact, had the operation been performed within two hours of the shooting, he believes he could have saved Dr. Handy's life. Dr. Goodfellow states he has performed five similar operations on shooting victims and two out of the five recovered. As a matter of fact, he states that Dr. Handy was dying when he commenced the operation."

At the hearing, a Mr. Wright testified in some detail about some of the circumstances that led to this affray. He stated that Dr. Handy called him into his office some days previously and asked him if he was a friend of Francis J. Henney and Mr. Wright allowed as how he was. And then the doctor had said, "Tell Francis J. Henney not to take Mrs. Handy's case," and the doctor insisted that he tell Mr. Henney not to do this and "tell Frank Henney that if he takes the case I will kill him, tell him not to take it." Mr. Wright remonstrated with the doctor but the doctor stated, "My wife is a morphine fiend, she does not deserve any. No lawyer can talk to her fifteen minutes without knowing that and when any lawyer discovers that it is his duty to surrender the case. I will kill any lawyer who takes the case and stands between me and my children." Wright remon-

strated with the doctor telling him that if he wanted to be a renegade he should turn outlaw and go into the mountains. This conversation apparently occurred not very long before the final meeting between Mr. Henney and Dr. Handy.

After the hearing, the judge gave the following verdict, "I have listened very carefully to the testimony which has been given, this is a case where much excitement and feeling has been engendered and is an important case. Two of the leading citizens of this place had an encounter and one is killed. As far as the standing of these parties goes, as far as their influence extends and the circumstances surrounding them, we have nothing to do. I concluded from the statements of threats made by the deceased that this was made in accordance with statements made by witnesses as how an attack should be made, how it should be conducted, taking into consideration the character of the deceased, who in his kindlier moments was one of the most just, one of the most kindest hearted men in the community, but in his emnity I may say that I have never known a man who would go farther to avenge a fancied or real slight or injury than Dr. Handy." And the judge goes on to state, "taking all this into consideration, that he decided that the defendant in this case acted in necessary self defense and committeed a justifiable homicide."

Dr. Goodfellow later moved to Tucson, succeeded Dr. Handy as Surgeon to the Southern Pacific Railroad. Gossip had it that he was not too solicitous for Handy's recovery. This certainly was an unjust criticism for he was probably the most skilled surgeon of the Territory. His experience with gunshot wounds, in Tombstone, was ample. 'Twas in Tucson he performed the first successful perineal prostatectomy — but that is another incision.

Thus closed the case of the famous Dr. Handy, who in one of the earliest accounts, after his arrival in Arizona Territory, it was related that he had committed homicide and he died in the same manner not too many years later.

Be that as it may, a physician was the first Chancellor of the University of Arizona at Tucson.

Arizona's Medical Memories

By Audrey D. Stevens



Dr. Scott Helm

DR. SCOTT HELM'S career as a medical hero in the sunny Southwest was rather brief, but certainly not uneventful. The nine years he spent in the Territory of Arizona left a fascinating imprint in the annals of this state's medical history. Not only was he an unusual personality, but he was described by friends who knew him as the most outstanding and capable surgeon in Phoenix in the 1890's.[1]

Dr. Helm was born in Lake Forest, Illinois, on January 8, 1862, the son of Attorney Henry Thomas Helm and Julia Lathrop Helm.[2] A graduate of Rush Medical School[3] at the age of 21, he spent a year interning at Marine Hospital, Chicago, Illinois, and one year in Heidelberg, Germany, where he specialized in surgery.[4] Of this specialty he was most proud and not above bragging about how much he felt he had learned through this period of study. In this writer's opinion he had something to brag about because in the early 1890's in Phoenix there were sixteen other doctors and of them all he was by far the best educated,[5] and probably the most skilled.

Arriving in Phoenix in 1888,[6] he became very well known within a short time and until his death in 1897, it is apparent that he was the delight of the newspaper editors and their readers. In 1890, he married Norma Jackson of Washington, D. C., but this marriage was brief since she died not long after they were married.[7]

The year 1892 proved to be an emotionally packed and professionally busy one for the hero of this biography. His strong educational background and surgical skill, in addition to having his own hospital, brought heavy demands for the young doctor's services. All this, plus constant and thought-provoking newspaper accounts, made him many friends as well as a few enemies. I am sure that if Dr. Helm could speak for himself, he would say that the year 1892 was "the year that was."

One of his enemies was a colleague of his, who, on July 19, 1891 charged Dr. Helm with performing an abortion.[8] This charge was later charged to murder. However, without leaving the box, the jury, on February 24, 1892, acquitted him.[9] Dr. Helm came out of this ordeal smelling like one of his favorite marchonelle roses.

In April he gave an address in St. Louis at the Second Annual Meeting of the Association of Military Surgeons. The title of his address was "The Primary Dressings of Fractures." This address was published in full in "The Transactions of the Second Annual Meeting of the Association of Military Surgeons of the National Guard of the United States." A portion of Dr. Helm's speech, describing his Arizona patients and surgical methods, is as follows:

"In a recent case of compound, comminuted fracture of the ulna and radius from a gunshot wound, I have used a splint made of manilla

paper, constructed of circular, longitudinal and oblique strips, stiffened with gum sandrac, and varnished with the same over all. A square was cut open at the point of entrance, for purposes of drainage and the application of antiseptic dressings. The result was quite satisfactory, there being a shortening of about three-quarters of an inch."

"In another case of a freighter run over by a freight-wagon loaded with 5,000 pounds of ore, fractures were sustained of the sternum, four ribs on the left side and two on the right, and the paper dressing was used, applied over sheets of cotton, with good results. It possesses the advantage of being not only light, but very firm if applied in strips and afterwood varnished, and is not as difficult as the plaster of Paris dressing, to remove. Then, too, if well constructed, it retains its continuity when cut open, so that it may readily be re-applied to the same case after inspection of the parts. It has been my custom, where I have used this dressing, to apply the strips in various directions, using a mixture of ordinary glue and gum sandrac, which is easily made by adding a little acetic acid, and which makes a very hard cement and one which does not often even by excessive perspiration, as often occurs in hot climates. After the dressing is applied, it may be varnished with an alcoholic solution of the sandrac gum or shellac, rendering the outside harder than it otherwise would be. This dressing may at any time when it is desirable for purposes of inspection, be readily cut open with ordinary plaster shears, and reapplied with tapes. It is not difficult to apply, is light in weight, and sufficiently durable for many fractures of the arm, leg, ribs or jaw."

"In one case of compound, comminuted fracture of the jaw from the kick of a horse, which came under my care and which had united so that the teeth did not antagonize properly, and the symphysis was thrown out of the median line, I was obliged to refracture and straighten the deviation. After removing several spicula of bone, together with nearly 100 "screw worms" from the wound, I made a cast of the jaw, constructing the paper splint over the cast. This splint was then applied, fastening it with tapes tied over the head, and the most satisfactory results obtained."[10]

The Arizona Gazette devoted almost one full page to this event. A portion of it reads:

"St. Louis, April 22, 1892. The Military Surgeons of the United States met for their Second Annual Reunion at St. Louis, Tuesday, April 19th. Dr. Scott Helm, Surgeon General of Arizona, delivered an able address on the 'Primary Dressing of Fractures,' which was closely listened to, and enthusiastically commended at the close. The method of bandaging broken bones with manilla paper as successfully applied by Dr. Helm in his Arizona practice, proved interesting to the many gray-bearded veterans of battlefield, hospital and private practice in convention assembled."[11]

In June Dr. Helm went to Tucson to assist Dr. George Goodfellow with surgery. Also in the operating room was Dr. W. V. Whitmore who later wrote, regarding Dr. Helm, that because of this surgery, he assumed Dr. Helm was the leading surgeon in Phoenix.[12]

In November Dr. Helm went to Louisville, Kentucky, and was married. To me the newspaper accounts make such delightful reading that I feel that they, too, should be included in this biography. A copy of one such report reads as follows:

"LOVE AND WAR"
"Arizona's Surgical-General Wedded
To One of Kentucky's Beautiful Belles,
Brilliant Marriage Ceremony"

"Louisville, Kentucky, November 17—A noted society event occurred in this city tonight being the wedding of Miss Janie Beeler, one of Louisville's popular and accomplished young ladies with Dr. Scott Helm, Surgeon-General of Arizona, who came from his far away territorial home in Phoenix, to claim a bride whose many friends deem worth several journeys around the world to secure."

"As anticipathy and in proper recognition of so memorable an occasion, the Surgeon-General bridegroom was honored with a reception and banquet Tuesday evening, given by Dr. S. S. Murtee, a cousin of the bride, and one of the leading gynaecologists in this country. All the distinguished physicians and many other prominent gentlemen of Louisville attended this conventional 'stag party' which marked the passing of an Arizona Mars under the yolk of Eros."

"The busy bridegroom could not tarry long, but hurried his bride to the train at 12:30 a.m., in order to resume his professional duties in Arizona as quickly as possible. The happy couple

will tarry one day in New Orleans and a few hours in El Paso, reaching their Phoenix home November 20, Thanksgiving morning."[13]

The following day, November 19, 1892, the Arizona Gazette followed the above article with this notation:

"Dr. Helm and his bride will arrive on Thanksgiving Day. The doctor has married one of the most accomplished young ladies in Kentucky and she will be an acquisitor to the society of Arizona's capitol."[14]

The arrival in Phoenix of the beautiful bride and the dashing groom must have been spectacular. In fact, Doctor was at all times a dashing figure. It is noted in letters from friends of his that his favorite flower was the marchonelle rose and when possible he loved to wear the buds in his coat lapel.[15]

In 1893 he attended another session of the National Association of Military Surgeons and for the second time was appointed on a committee to organize an International Congress of Military Surgeons. The other members of the committee were: Col. Chas. R. Greenleaf, Deputy Surgeon-General, U.S.A.; Brig. General Jos. B. Bryant, New York; Brig. Thos. Kitteridge, Mass.; Capt. Bertolette, U. S. Navy; Capt. Wertenbaker, U.S.M.H.S. This lead to an active correspondence with Sir William A. McKenzie, Surgeon-General of Her Majesty's Forces.[16]

In my series of articles in ARIZONA MEDICINE, published in 1964, I included newspaper reports of Dr. Helm's surgery and for this reason and also because of lack of space, I am excluding them from this article. In the life of "never a dull moment Helm" the years of 1893 and 1894 were no exception. In 1893 he was the City Health Officer and in 1894 he purchased a new horse. The Arizona Gazette's comments on his horse reads:

"Dr. Helm is breaking his speedy Orme mare, Molly, to the saddle. She flies up Central Avenue at a 2-minute gate in emergency cases like lockjaw or twins."[17]

Dr. Helm usually wore a black hat trimmed with a white ostrich feather. I can just picture the dramatic figure he must have presented to the early settlers of Phoenix as he went dashing down Central Avenue with the white feather on his hat waving in the breeze.

In 1895 he made the long journey to Tucson again to assist Dr. Goodfellow with surgery.[18] He also performed surgery in Prescott.[19] In fact it is my opinion that had Dr. Helm lived a few years longer he would have been as famous and as well remembered as a few of his friends and colleagues such as Dr. Ancil Martin[20] and Dr. George Goodfellow.

While the wearing of guns was the cause of a few of the territorial doctors' deaths, love of horses led to Dr. Helm's.

Two articles that contain the most information regarding Doctor's death and plans for his funeral services read:

"ANNOUNCEMENT
Phoenix, Arizona, October 9, 1897
Headquarters National Guards of Arizona
Adjutant General's Office
General Orders — No. 7"

"The mournful announcement is made that while participating in a parade of a fraternal society last evening in this city, Col. Scott Helm, ex-Surgeon-General, N.G.A. was accidentally killed by the spirited horse which he was riding, becoming unmanageable and throwing him violently to the ground, and falling upon him.

Col. Scott Helm was appointed Surgeon-General N.G.A., with the rank of Colonel in 1891 and served with the guard until transferred at his own request to the N. G. veterans in 1896. The late Col. Scott Helm was an officer of generous mould and warm hearted impulses and brought to the duties of his office superior administrative and executive abilities. He was a surgeon eminently distinguished in his profession. As Surgeon-General of the guard he was zealous and enthusiastic in all matters relating to its welfare and actuated by esprit de corps and with generous liberality he organized, equipped and maintained at his own expense a hospital corps. His eminent and valuable work of instructing the hospital corps, brought fruit in the high state of proficiency which it has attained, and which will ever stand as a monument to his ability as a medical officer."

"As a mark of respect to the late Col. Scott Helm all officers of the N.G.A. veterans and the officers of the general staff of the governor, in the city of Phoenix, will attend the funeral."

"It being impracticable to concentrate the regulation number of troops to act as escort to the remains of the late Col. Scott Helm, Major Frank

G. Russell, Com. 2nd, Battalion 1st Reg. Infantry, will designate a company of infantry and the detachment of the hospital corps to act as a guard of honor."

"The national flag will be displayed at half staff on the armory in this city until the day after the funeral."

By Command of—
Chas. A. Akers,
Acting Governor."[21]

"THE ARIZONA GAZETTE of October 10, 1897.
"Dr. Helm's Funeral
Will Take Place Today From the
Family Residence"

"The funeral of Dr. Scott Helm, who met with such a tragic death Friday night, will take place this afternoon at 3 o'clock from the family residence. The funeral will be under the auspices of the Masonic Lodge."

"The Rev. Mr. Penick, of the Episcopal church, will conduct the services at the house and the Masons will render their services at the grave."

"The pallbearers will be chosen from the Masons, Odd Fellows, Workmen, Elks, and Woodmen of the City, of all of which orders the deceased was a member. The N.G.A. Hospital Corps which owes its creation to Dr. Helm will act as an escort of honor."

"The remains will be buried in the uniform of Surgeon-General, retired, which honor was attained by Dr. Helm some years ago. Over the uniform will be placed the flag of the hospital corps and all enfolded in an American flag."[22]

It was later reported that his funeral was a "gorgeous affair."[23] His horse led the procession to the old cemetery on Jefferson Street where he is buried. His gravestone is still there and marks the passing of one of our greatest, best educated pioneer Arizona physicians.

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ACKNOWLEDGEMENT

If I were the Winston Churchill type of person, and it is quite evident that I am not, I would be able to really show my appreciation to the following: Miss Robin McIntosh, Librarian, Los Angeles County Medical Association, Los Angeles; Mr. Joseph I. Miller, History Assistant, Dept. of Library and Archives, Capitol Bldg., Phoenix; and especially Dr. John W. Kennedy, Phoenix, whose sense of humor, encouragement and information has been most appreciated by at least one hysterical historian — me.



Audrey D. Stevens

Mrs. Stevens is the wife of Dr. Weir C. Stevens, Kearny, Arizona. She is the Chairman of the Committee preparing an extensive historical exhibit for the forthcoming Annual Meeting.



Some Observations on the Development of Modern Medical Care for the Navajo Tribe



Clarence G. Salsbury, M.D.

FOR many centuries the only medical care available to the Navajo was that given by the medicine man, who served not only as a physician, but spiritual advisor as well. They were among the brightest men in the tribe and began their training around 10 years of age. They were respected and looked up to, and although their ideas as to the cause and cure of disease were far different from our present-day concepts, still they no doubt were helpful in many cases. Herbs and many other substances were used in addition to the chants and sings that were held over the patient. There are several hundred chants, but 12 or 15 of these are most often used and even the best medicine men seldom master more than a few of these chants. Some last for as long as 9 nights, and a mistake by the singer means that the ceremony begins all over again.

The first real contact with white man's medicine was around 1850 when the army moved into the area we now call the Navajo Reservation. In 1864, the Navajos surrendered and all who could be rounded up were taken to Fort Sumner, New Mexico, where they were held prisoners for four wretched years — during which, due to poor diet, poor housing and inadequate medical care, about two-thirds of the prisoners died.

Phoenix, Arizona.

At the conclusion of the treaty in 1868, the remaining Navajos returned to their beloved desert domain and started life all over again.

Schools and hospitals were built in various locations on the reservation; however, the response was understandably something less than enthusiastic. They had not been favorably impressed by their experience at Fort Sumner. There were near riots when the government attempted to force children to attend school, and hospitals were considered "Chindi" houses where people had died.

The government built seven small hospitals in various parts of the reservation, and around the turn of the century the Episcopalians and the Presbyterian missions began to provide small hospital facilities. The Episcopalians built a hospital at Ft. Defiance and another near Farmington. The Presbyterians assigned a doctor to Ganado Mission in 1905, and in 1912 a small adobe hospital was built. Another small hospital was also built at Red Rock not far from Shiprock. The Christian Reformed Church also built and operated a small hospital near Gallup, New Mexico. It's an understatement to say that none of these hospitals — government or mission— could be considered today as meeting minimum standards. Buildings and equipment were all sub-

standard. The staffs were extremely limited and in many cases left much to be desired in training and skill. There were of course several outstanding exceptions. One of the early pioneers in government service, who enjoyed great confidence on the part of the Navajos, was a Dr. Wigglesworth who served at Ft. Defiance hospital. However, the lack of adequate plant, equipment and personnel, as well as the lackadaisical support of the Bureau of Indian Affairs, discouraged most of those who were qualified to give real service.

While home from medical missionary service in China in 1927, I was asked to fill in temporarily for a period of two or three months at Ganado Mission, as the doctor had left unexpectedly. This seemed an interesting temporary experience and so I accepted. After the very active surgical and medical activity in our large hospital on the Island of Hainan, with its teeming population, it was a decided change to come to the arid Navajo desert with a population of less than two to the square mile, and the little 12-bed adobe hospital.

No hospital on the reservation had a laboratory or X-ray. Our sterilizers at Ganado were heated with primus pressure stoves — a satanic invention calculated to make a cussing maniac out of an otherwise sensible and responsible missionary doctor. The stoves would usually give up the ghost about the middle of the sterilization; then you'd have to start all over again.

No hospital had more than one doctor and most had no more than two or three nurses. There were no dietitians, record librarians, or laboratory technicians. At Ganado we only had electric lights until 9:30 or 10 p.m. Kerosene lamps were used the rest of the time. One night the Navajo boy filled a lamp with gasoline, which promptly exploded and would have burned the hospital to the ground if it had not been discovered immediately.

It was difficult to persuade patients to come to the hospital since they considered it a death house, and if there was a death in the hospital all the patients immediately left by the nearest exit regardless of the weather.

The car provided for the doctor was a Chevy touring car. There were no roads — only trails — and over these we would travel 2,000 or 2,500 miles a month treating patients in their hogans or at trading posts, or on the running board of the car.

The challenge was to see if we could interest Navajos in coming to the hospital where we could give them better care than in the hogan. Gradually the tide began to turn and more patients came in. They even brought their horses to the doctor when they had been torn up on barbed wire.

At this stage the medicine men were a great problem, as they would not permit their patients to come to the hospital unless they were practically moribund.

Just when we were beginning to feel we were breaking the ice, a patient came who needed an open reduction and plating of a fracture of the lower leg. It had taken days to persuade the parents to allow the operation. We had just started to operate when the patient died on the table from an embolism.

Not only did all the patients leave, but when the patient's parents told their story at the trading post there was a great wave of indignation and plans were discussed as to what should be done with this white doctor who said he knew how to operate, but who had killed this girl.

When the discussions had reached a critical stage — strangely enough, one of the most prominent medicine men got up and addressed the mob. He told them that all medicine men — white or Navajo — wanted their patients to get well, but sometimes they did not. He didn't know what happened at the hospital, but certainly the white doctor had done his best to save the girl's life. No rash thing they were planning would bring her back to life, so the wisest thing for them to do was to quietly go home and insofar as they could, forget this terrible thing that had happened. This they apparently did and, needless to say, from that time on Red Point, the old medicine man, and I were firm friends.

The hospital was practically empty for weeks before they gradually began to come in again. In time all our beds were filled and we had to put up a tent to use as a ward for the overflow.

I appealed to our Board to give us $15,000 to build an addition to our little hospital. After several months I received word that the money

was available. I immediately wired the Board and told them that we didn't want the money, as we had already outgrown the proposed addition.

The Board was disgusted and asked what I really wanted anyway. I replied that $50,000 was needed to build a real hospital. Surprisingly, the money was found almost immediately and we were able — believe it or not — to build and equip the first modern 75-bed hospital on the reservation. This seems unbelievable today when hospital costs are about $25,000 a bed.

Later on the capacity was doubled. The new hospital was opened in 1930. It boasted the first laboratory, employed the first dietitian, and a little later one of our nurses became the first registered record librarian in the state of Arizona.

In the fall of 1930, we organized the first school of nursing for the Indian girls in the United States. Two girls were admitted — one the daughter of a medicine man. They were graduated 3 years later.

Eventually representatives of more than 50 tribes were admitted to the school of nursing. They came from as far East as New York and as far West as the Aleutian Islands. In the enrollment we also had Cubans, Puerto Rican, Filipino, Chinese, Japanese, and Spanish-speaking girls.

Our only color line was that we would not admit anglo saxon girls, since they had ample opportunity to enroll in various city hospitals.

The graduates made an enviable reeord. Fifty percent of the graduates served with distinction in World War II. When our first class of nurses graduated, Governor R. B. Moeur and our old friend Red Point in all his regalia gave the two principal commencement speeehes.

Eventually not only Red Point, but many other medicine men, came to the hospital as patients and brought their families as well. Sometimes we would have five or six medicine men in the hospital as patients at one time.

About 1936, the annual clinical conference was established and brought some of the finest medical and surgical talent from all over the United States. In addition to our own fine men from Arizona, delegations came from various parts of the country. The partieipants in the program paid their own expenses and many of them worked like slaves for the 3 days of the meeting. Many said these meetings were the best of any they attended.

Another innovation was charging Indian patients if they were able to pay. An increasing number asked for private room care and these were charged the same surgieal and room fees as white patients.

The new modern well-equipped hospital and the dynamic new programs brought the Indian Bureau health officials to life and they demanded and got a new million dollar hospital at Ft. Defiance, staffed by a group of specialists.

However, the Indians showed growing dissatisfaction with the government program and in the mid fifties the Indian Bureau Medical Service —not alone on the Navajo Reservation but throughout the entire country — was transferred to the U. S. Publie Health Service. This brought about dramatic changes. Congress bought the package and soon almost unlimited funds were available for new plants and additional staff.

In many cases the facilities provided seemed far more elaborate than necessary. As an example, a 200-bed hospital was built at Gallup, New Mexico at a cost of nearly 5 million dollars, and staffed by 23 highly qualified physician specialists.

The Indian would have been much happier if the facility had been built on the reservation rather than Gallup. The taxpayers of the area, too, would be much happier if they could have a hospital even one-half as elaborate as the Indian facility.

In spite of the lavish expenditures, it must be admitted that the Indians now enjoy much more adequate health protection and medieal care than they have ever known before. The redueed infant mortality rate and the long strides toward conquering tuberculosis are all eloquent testimony that much good has been accomplished. The tribe now has one of its own men serving as a fully qualified and well trained M.D., and others are in medical schools preparing to become doctors.

The Navajos, who for so long were reluctant to accept modern medical care, now demand the best. Truly time marches on!

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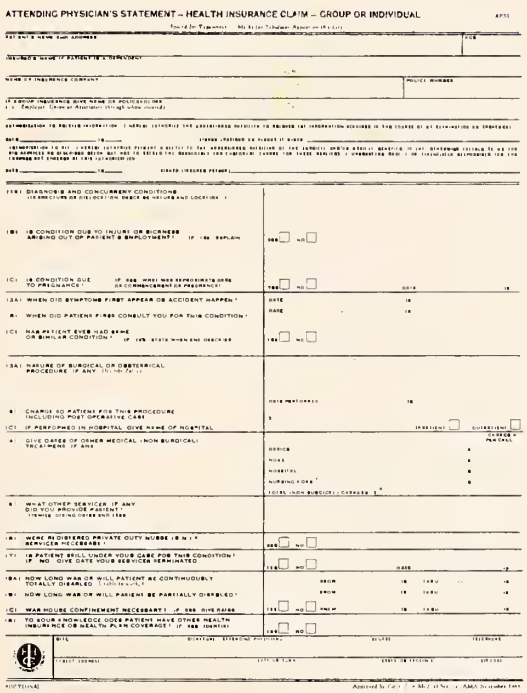
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4.
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3. elderly or debilitated patients
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5. patients on long-term tetracycline or corticosteroid therapy.

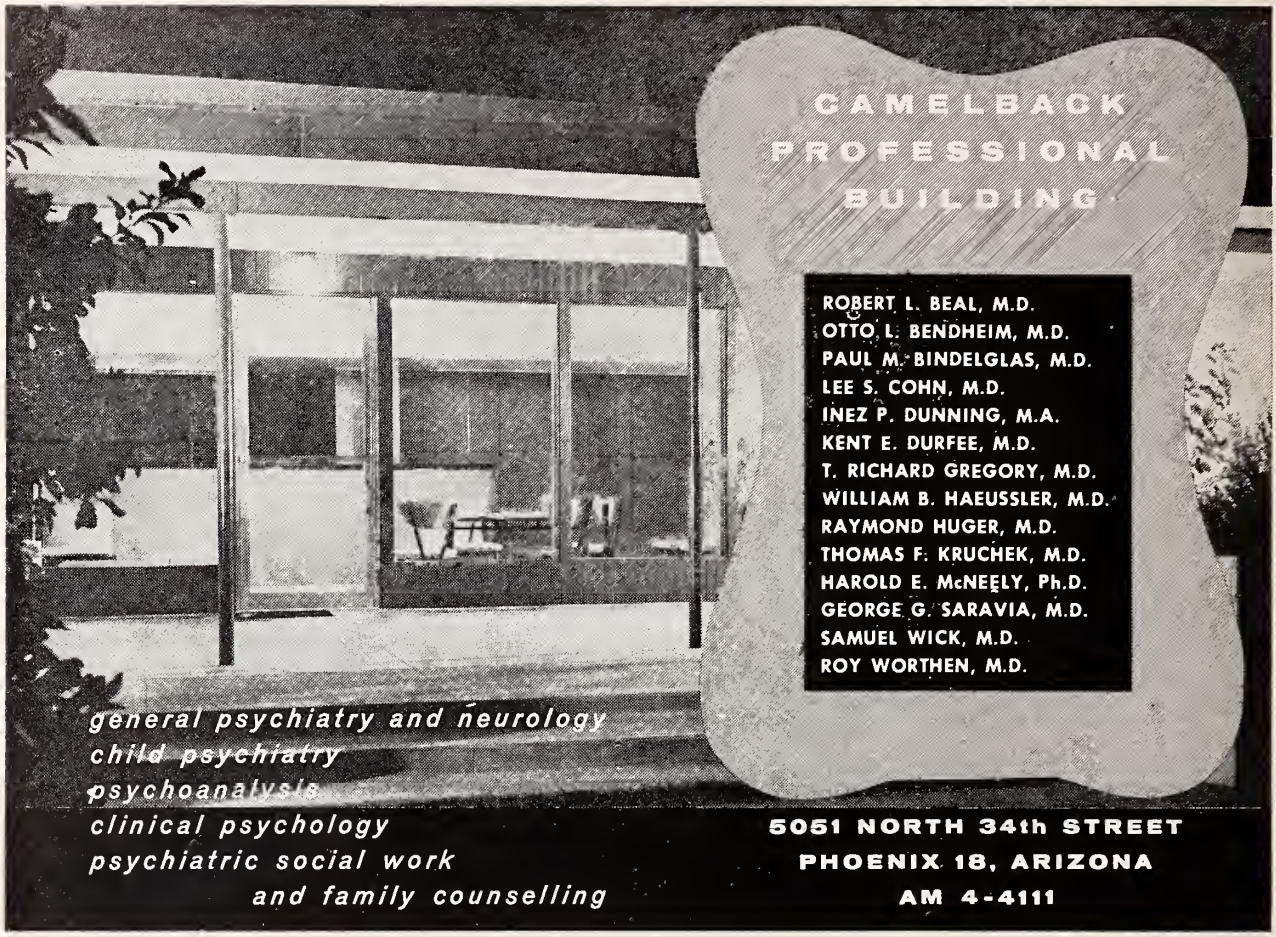
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Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. No cases of photosensitivity have been reported with Tetrex (tetracycline phosphate complex). With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).
Precautions: Bacterial superinfection may occur. Infants may develop increased intracranial pressure with bulging fontanels. In gonorrheal therapy, serologic tests for syphilis should be conducted initially and monthly for 3 months.
Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.
Usual Adult Dosage: 1 capsule q.i.d. Continue therapy for 10 days in beta-hemolytic streptococcal infections. Administer one hour before or 2 hours after meals.
Supply: Capsules, bottles of 16. Each capsule contains tetracycline phosphate complex equivalent to 250 mg. tetracycline HCl activity and 250,000 units of nystatin. Oral Suspension, 60-ml. bottle. Each 5 ml. contains tetracycline equivalent to 125 mg. tetracycline hydrochloride and nystatin, 125,000 units.

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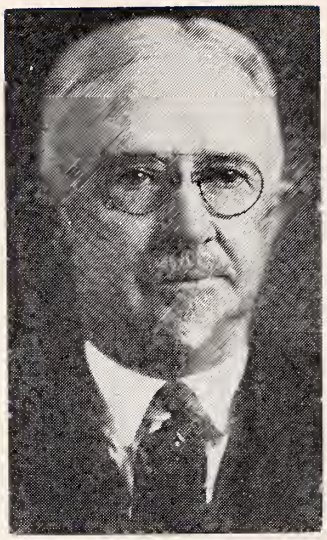
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H. A. Hughes, M.D.
1893



A. Miller, M.D.
1894

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P. G. Cotter, M.D.
1895

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D. M. Purman, M.D.
1896



C. H. Jones
1897



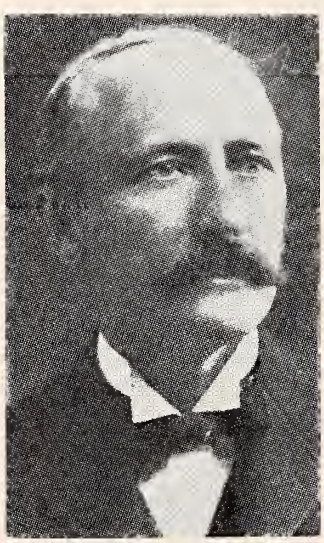
W. V. Whitmore, M.D.
1898



W. Wylie, M.D.
1899



T. B. Davis, M.D.
1900



H. W. Fenner, M.D.
1901

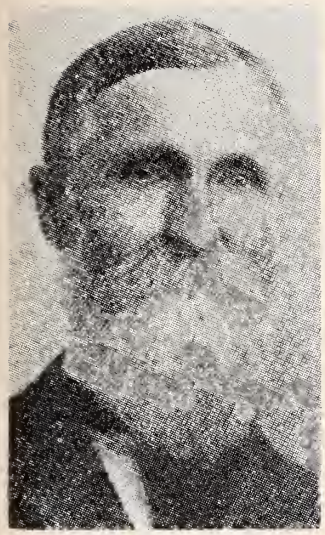


W. Duffield, M.D.
1902



L. D. Dameron, M.D.
1903

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W. H. Ward, M.D.
1904



J. W. Coleman, M.D.
1905



O. E. Plath, M.D.
1906

Photo Not Available

A. R. Hickman, M.D.
1907



A. W. Olcott, M.D.
1908



R. N. Looney, M.D.
1909

Photos Not Available

J. W. Foss, M.D.
1910



F. E. Shine, M.D.
1911



J. E. Bacon, M.D.
1912



I. R. Huffman, M.D.
1913

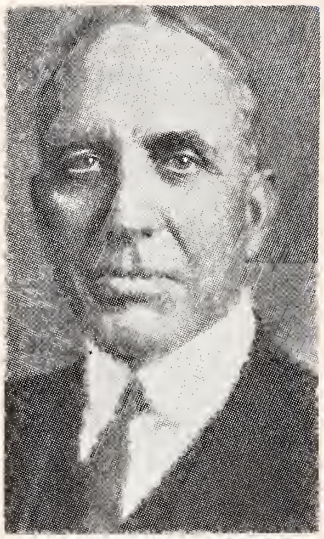


J. W. Flynn, M.D.
1914



R. E. Thomas, M.D.
1915

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R. Ferguson, M.D.
1916



W. A. Holt, M.D.
1917



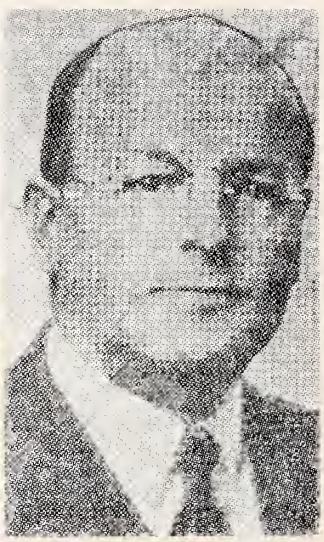
W. W. Watkins, M.D.
1918



C. E. Yount, M.D.
1919



A. M. Tuthill, M.D.
1920



A. L. Gustetter, M.D.
1921



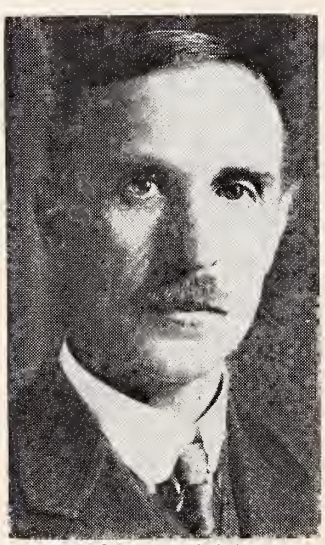
H. T. Southworth, M.D.
1922



C. A. Thomas, M.D.
1923



R. D. Kennedy, M.D.
1924 & 1925



G. A. Bridge, M.D.
1926



C. S. Vivian, M.D.
1927



A. C. Carlson, M.D.
1928

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S. H. Watson, M.D.
1929



J. M. Greer, M.D.
1930



H. A. Reese, M.D.
1931



C. Gunther, M.D.
1932



N. C. Bledsoe, M.D.
1933



F. G. Holmes, M.D.
1934



M. Clyne, M.D.
1934



G. R. K. Swetnam, M.D.
1935



J. D. Hamer, M.D.
1936



C. R. Swackhamer, M.D.
1937



H. W. Rice, M.D.
1938



C. S. Smith, M.D.
1939

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D. F. Harbridge, M.D.
1940



W. P. Holbrook, M.D.
1941



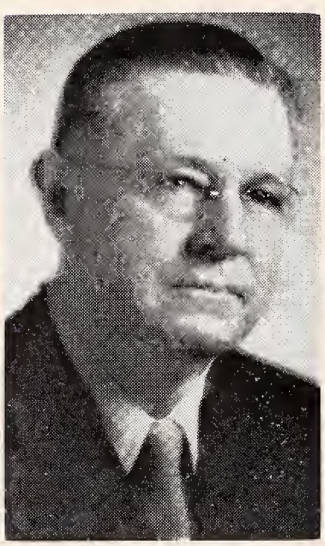
E. P. Palmer, M.D.
1942



O. E. Utzinger, M.D.
1943



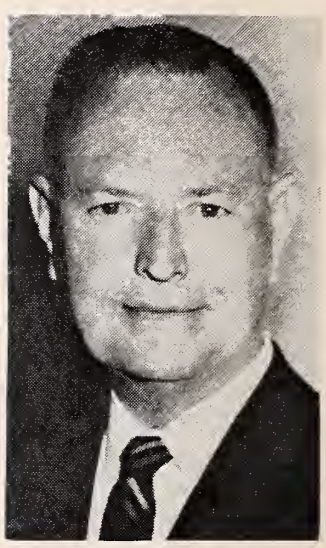
D. L. Mahoney, M.D.
1944



C. P. Austin, M.D.
1945



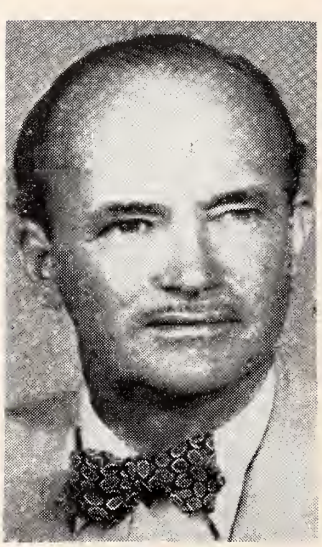
G. O. Bassett, M.D.
1946



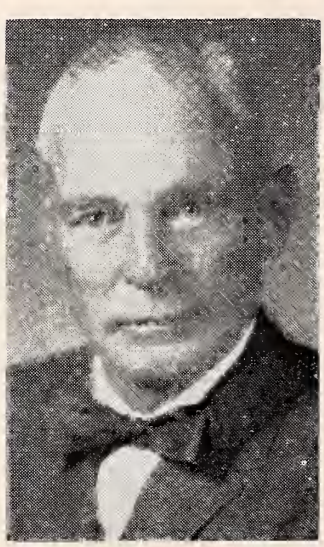
P. T. Brown, M.D.
1947



H. W. Kohl, M.D.
1948



R. S. Flinn, M.D.
1949



R. E. Hastings, M.D.
1950



H. T. Southworth, M.D.
1951

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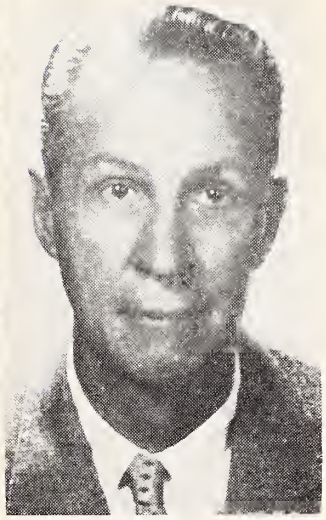
T. H. Bate, M.D.
1952



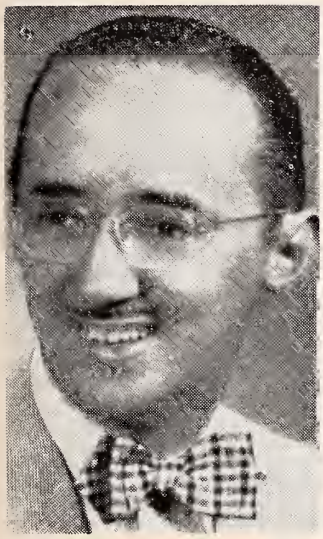
E. M. Hayden, M.D.
1953



O. W. Thoeny, M.D.
1954



H. E. Thompson, M.D.
1955



A. I. Podolsky, M.D.
1956



C. C. Craig, M.D.
1957



W. R. Manning, M.D.
1958



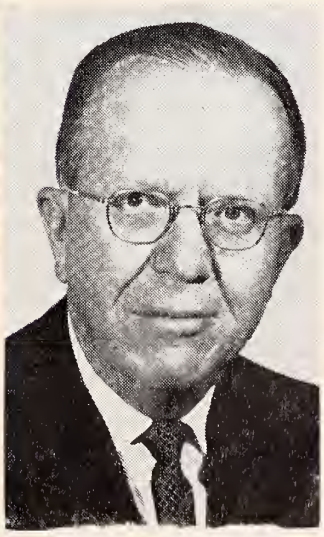
D. W. Melick, M.D.
1959



L. E. Beaton, M.D.
1960



L. B. Smith, M.D.
1961



C. E. Yount, Jr. M.D.
1962



W. B. Steen, M.D.
1963

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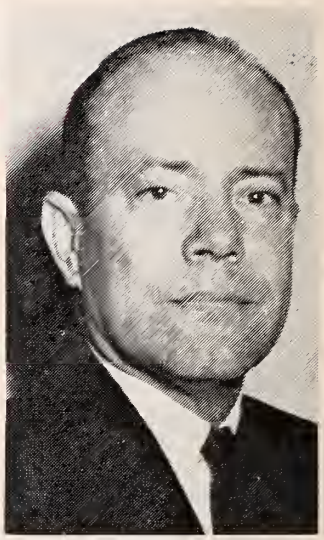
W. A. Brewer, M.D.
1964



J. E. O'Hare, M.D.
1965



A. H. Dysterheft, M.D.
1965



P. B. Jarrett, M.D.
1966



Medical Education in Arizona: A Contempory History

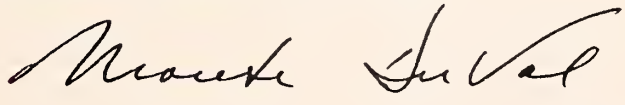
Since this issue of the Arizona Medical Association Journal is devoted to several aspects of the history of medicine in our state and since many of our physicians have arrived after the key events took place, this might be an appropriate time to summarize briefly some of the highlights which led to the development of a medical school in our state. Since many of the principals who were earlier involved in these developments are still a very active part of the contemporary scene it seems even more appropriate to do so at this time.

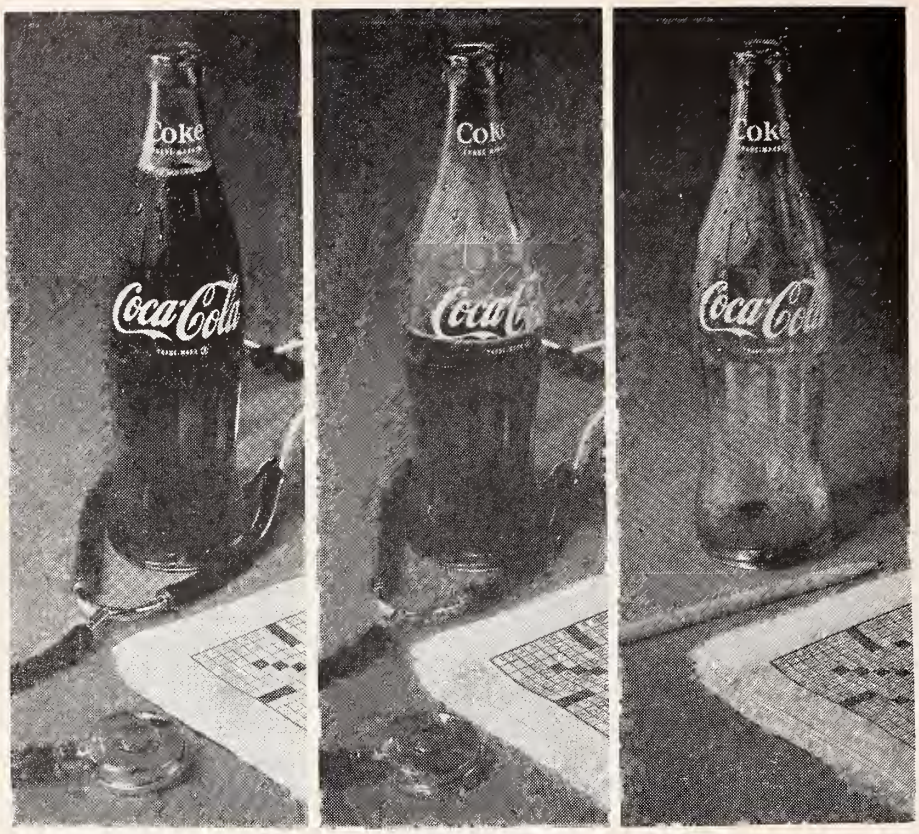
A review of the records shows that the Maricopa County Medical Society, in 1951, established a committee for the purpose of studying the problems which faced the Arizona college student who wished to enter medical school. It was their recommendation that a long-range plan be developed which would lead toward the provision of an opportunity for medical education for our college students. They further suggested that although this might require a subsidy or scholarship plan it was preferable to attempting to start a medical school within the state at that time. Three years later, a study of state-sponsored higher education, which had been carried out at the request of the Board of Regents, was completed and published. This report also recommended against the establishment of a medical school and suggested instead that dentistry, veterinary medicine and forestry, along with medicine, should be accommodted through collaboration with programs elsewhere. The establishment of the WICHE program shortly thereafter accomplished this.

By 1957, however, two things were becoming apparent. First, there was a steadily increasing pressure within each of the western states having a medical school to favor the admission to their schools of students who were residents of their own states. Although the level of cooperation between these schools and the WICHE program remained high, a gradual shift toward the admission of their own residents was inevitable. Second, the rate of growth of the population in Arizona greatly outstripped earlier estimates and the demand for entrance into medical schools increased greatly.

In 1958 a private citizen made a very generous offer to the Board of Regents which had, as its objective, the creation of a medical school for Arizona. With the question now formally posed to our Regents, a special hearing on this question was held in Flagstaff in the summer of 1958. As a result, the Regents engaged the Provost of the University of Florida to make appropriate recommendations regarding this question and, almost simultaneously, the Board of Trustees of the Tucson Medical Center offered to convey to the Regents title to its land and buildings as a site for the establishment of a medical school. The consultant to the Regents entered an application to the Commonwealth Fund early in 1959 for assistance toward a proposed study and the application was promptly approved. The Arizona Medical Association also appropriated funds toward the study and, at its annual meeting that same spring, devoted a full day toward a thorough discussion of this topic.

By the spring of 1960 the study team had been selected. It assembled and commenced work in July of that same year and completed its activities in June of 1961. Its findings were published in a book entitled "The Arizona Medical School Study" which was promptly endorsed by the Regents after its publication later that same summer. Essentially, the study group recommended that Arizona should develop a full, four-year medical school on the campus of the University of Arizona in Tucson. Implementation of these recommendations began with a legislative appropriation for planning purposes in 1963. Early in 1964 the first members of the planning team arrived in Arizona and their activities have since been covered on this page.





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Diplomates of American Board of Radiology

Lorel A. Stapley, M.D., Consultant Pathologist

75 Years Later—

It is with great pride and gratitude that ARIZONA MEDICINE presents the following editorial by Robert F. Lorenzen, M.D., written especially for this issuie. Editor

"The best thing we get from history is the enthusiasm it arouses." Even if this quotation from Goethe is not entirely true, it is true that enthusiasm is aroused in most readers by the study of history.

We hope that the historical stories and anecdotes printed elsewhere in this issue pique the curiosity and interest and arouse some enthusiasm in the members of the State Association.

It has been nearly three quarters of a century since the first meeting of an Arizona Territorial Medical Association was held at the commercial Hotel in Phoenix. Dr. Joshua Miller was the first President, and Doctors Ancil Martin, Michael Gilber, Isaac B. Hamilton, John Trail Green and Logan Dameron were among the first officers. There were fifteen physicians at this first meeting, and it is interesting to speculate on how they would have prophesied medical care in Arizona in the year 1966. By the same token it might be interesting to ask each of the current officers to record his forecast of medical care in the year 2041.

The issues discussed at the early meetings included establishment of a State Board of Health to enact a law requiring use of the Credé procedure in newborns. The issue of methods of committing patients to the insane asylum was discussed, as it is still being discussed.

Although specific items may have differed from those of today, the underlying thesis of providing the best care for patients was paramount then as now.

Edmund Burke has said that living men can have an eternal contract with men who have gone before. We must continue to carry on the work of those who have preceded us and provide a stronger basis for care of the sick for those physicians who are to follow. We should keep this in mind as we meet later this month and discuss medical, social and political questions applying to the care of our patients.

Robert F. Lorenzen, M.D.

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1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.
4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
5. The Journal reserves the right to edit all material.
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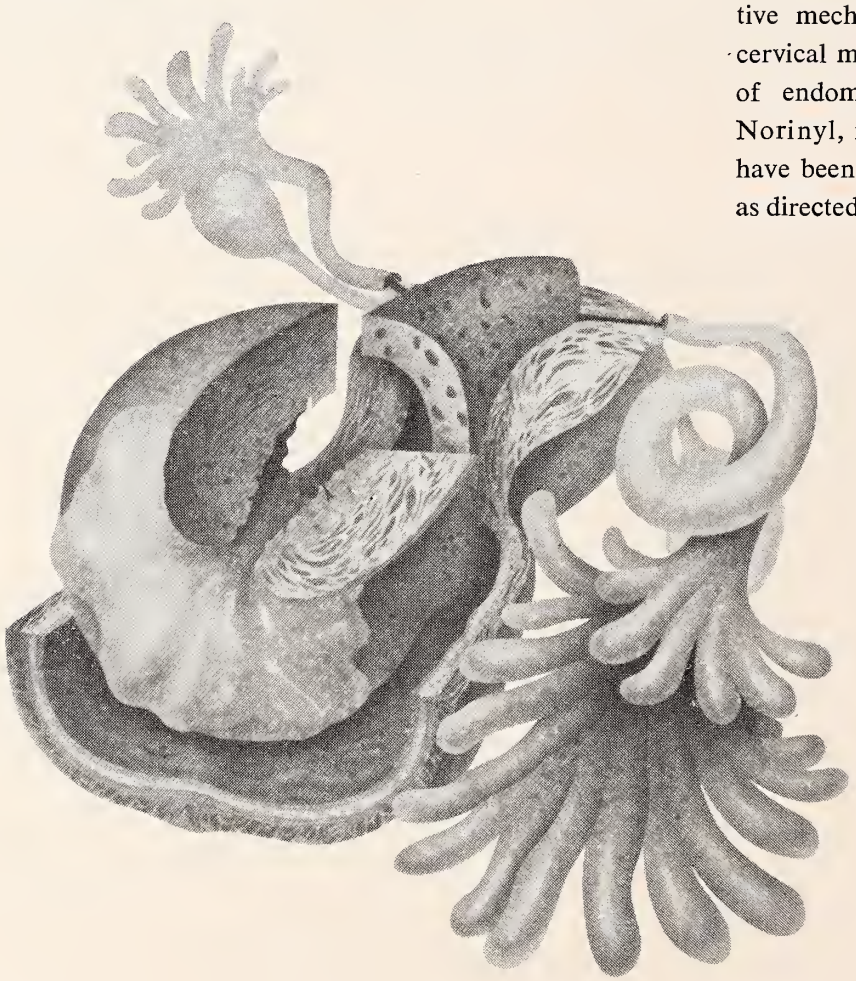
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Contraindications: Thrombophlebitis or pulmonary embolism (current or past); cardiac, renal or hepatic dysfunction; carcinoma of the breast or genital tract; pregnancy; severe depression; history of cerebral vascular accident. **Warning:** If sudden onset of proptosis, diplopia, loss of vision, or migraine occurs, stop medication pending examination. If papilledema or retinal vascular lesions are found, withdraw medication. **Precautions:** When lactation is desired, withhold Norinyl until nursing needs are established. Existing uterine fibroids may increase in size. In metabolic or endocrine disorders careful clinical preevaluation is indicated. If liver or endocrine function tests are indicated, withhold Norinyl prior to tests. Patients with a history of epilepsy, migraine or asthma require careful observation. Thus far no deleterious effect on pituitary, ovarian, adrenal or uterine function has been noted; however, long-range possible effect on these, and other organs, must await more prolonged observation. **Side Effects:** Changes in the menstrual cycle, symptoms resembling early pregnancy, weight gain, nausea, headache, dizziness, nervousness and irritability. **Dosage and Administration:** One Norinyl Tablet orally for 20 days, commencing on day 5 through and including day 24 of the menstrual cycle. (Day 1 is the first day of menstrual bleeding.) **Availability:** Dispensers of 20 and 60 tablets; bottles of 100.

References: 1. Council on Drugs, JAMA 187:664 (Feb. 29) 1964. **2.** Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. **3.** Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. **4.** Cohen, M. R.: Paper presented at Symposium on Low Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. **5.** Hammond, D. O.: Ibid. **6.** Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. **7.** Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. **8.** Kempers, R. D.: GP 29:88 (Jan.) 1964. **9.** Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. **10.** Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. **11.** Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. **12.** Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. **13.** The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. **14.** Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. **15.** Merritt, R. I.: Appl Ther 6:427 (May) 1964. **16.** Newland, D. O.: Paper presented at Symposium on Low Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

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In its program of bringing vital facts about cancer to the public, the Society has two new films, both available for showing through any ACS Unit. WHO, ME? dramatizes the hazards of cigarette smoking. SENSE IN THE SUN urges both sun workers and sun worshippers to exercise caution. Like all Society films, their object is to save lives and diminish suffering from cancer by giving forceful expression to many of the facts about cancer with which you, doctor, guide your patients.

american cancer society

lungs



Squaw Peak Sketches

Of Pithy Pioneer Physicians

by dry gulch jake

ITEM

This is a contemporary Arizona Physician, recently retired, but known and beloved throughout the State.

He first came to Arizona to do industrial medicine during the construction of the Roosevelt Dam.

With Dr. Palmer he was a co-founder of the Mesa Southside Hospital. He served in the U.S. Army Medical Corps during WW I. He later returned to Phoenix and established himself as a general surgeon with a special interest in orthopedic surgery. He refused to accept a certificate by the American Board of Orthopedic Surgery since he felt that this would limit his practice and that specialization to this degree was not desirable. He served with the Medical Department of the U. S. Navy during WW II and returned to Phoenix again to resume his practice. He was always a prime mover in civic affairs and served on the City Council.

The late Warner W. Watkins, M.D., said of him, "He is probably one of the few physicians who ever had anything but friends amongst his fellow practitioners."

This, as many of you will recognize who dwell in the Salt River Basin, is none other than our beloved Joseph Madison Greer, M.D.

ITEM

There may be some dissension about where the first hospital was established in Arizona; this problem of "firsts" always gives rise to some rivalry. Perhaps someone will come up with the date on an earlier hospital than the one which is described. Some Arizona historians maintain that the first hospital in Arizona was established by a physician in 1883 following a typhoid epidemic in Bisbee, Arizona. It was a prefabricated house made of heavy cardboard, one-quarter of an inch thick, reinforced with wooden frames. The miners called it Doc's crackerbarrel.

The physician was a Dr. Darlington who left Bisbee in 1899, took further training at Grosvenors Hospital in New York and became the Health Officer of greater New York City.

From the Dr. C. C. Coleman papers.

ITEM

Dr. Hugh Young of Johns Hopkins fame—and a prostatector of reknown—stated that this doctor "deserves credit for being the first to successfully perform a prostatectomy. He did this by the perineal route and removed all three lobes."

The first surgery of this kind was performed September 29, 1891, in Tucson, Arizona, without a surgical ampitheater, anesthetist, dripping jugs of electrolytes, units of blood, intensive care units, reams of laboratory reports, cardiac surveillance, intravenous urogram xographs, hospital administrators, chief nurses, hospital charts, Blue Cross or Medicare. His assistants were an English nurse and his twelve-year-old daughter.

This physician was Dr. George Goodfellow, 1855-1910.

John W. Kennedy, M.D.

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Salmonella schottmülleri	Salmonella newport
Salmonella typhimurium	Salmonella anatum
Salmonella choleraesuis	Salmonella derby
Salmonella enteritidis	

Proper antibacterial therapy for individual cases should help in reducing the total number of cases in an epidemic situation.

Side effects are infrequent. A few hypersensitivity reactions to Furoxone have been reported including a fall in blood pressure, urticaria, fever, arthralgia and a vesicular or morbilliform rash. These reactions subsided promptly following withdrawal of the drug. Primaquine-sensitive patients may develop a mild reversible hemolytic anemia. Nausea, emesis, headache or malaise may occur occasionally. To obviate alcohol-disulfiram type reactions, advise against use of alcohol-containing drugs during therapy and four days thereafter.

Do not give to infants under one month of age.

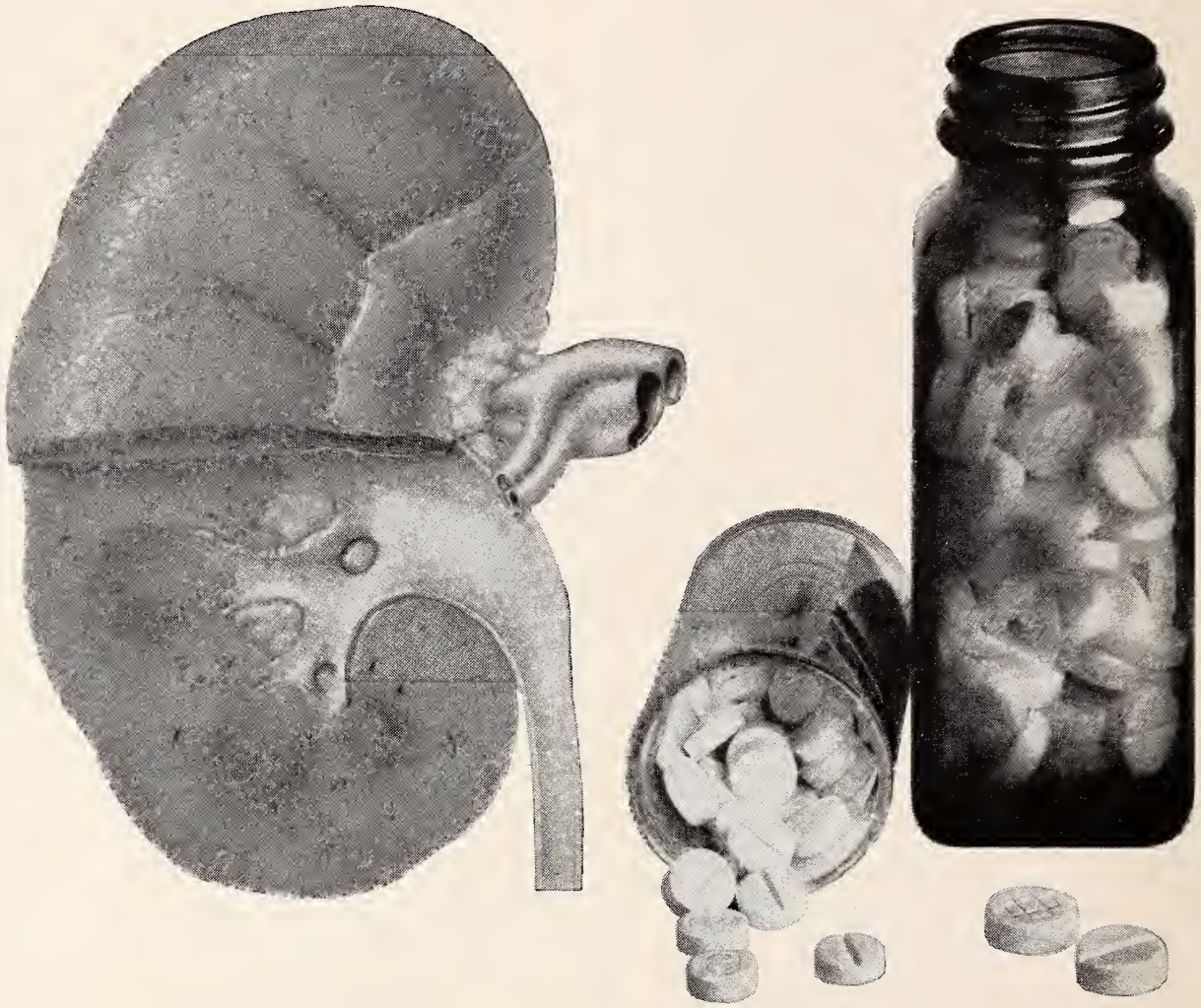
Composition: Furoxone Liquid contains, per 15 cc. tablespoonful, furazolidone 50 mg., pectin 225 mg., and kaolin 3.0 Gm. Furoxone Tablets each contain 100 mg. of furazolidone.

References: 1. Editorial: J.A.M.A. *189*:691 (Aug. 31) 1964. 2. Foertsch, J. H.: J. Oklahoma Med. Assn. *57*:449 (Oct.) 1964. 3. Paul, H. E., and Paul, M. F.: The Nitrofurans—Chemotherapeutic Properties, in Schnitzer, R. J., and Hawking, F. (Eds.) Experimental Chemotherapy, Vol. 2, New York, Academic Press, 1964.

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The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

• Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.

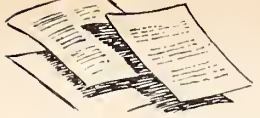
• From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

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where today's theory is tomorrow's therapy



"Medicine In Territorial Arizona"

Reviewed by Roland F. Schoen, M.D.

CONQUEST, exploration, wars of expansion, a great civil war, search for mineral wealth, land, climate and adventure. These are the ingredients which brought an influx of people into Arizona. Doctors are people; they are basically active, inquisitive and curious people; people having all the principal, basic emotional reactions, heightened and sharpened by a scientific training.

Doctors came to the area we know as Arizona long before the name originated, the first accompanying Francisco Vasquez de Coronado on the exploration of 1540. Coronado brought not only a physician, he unwittingly carried with him his greatest armament, new diseases, specifically smallpox and measles, which decimated the Indian inhabitants of the region far beyond the possibility of any armed conflict, leaving literally millions of Indian dead in the wake of the marches, while records show that not one Spaniard was affected.

Many physicians have followed Senor Ramos, the physician of Coronado. They came with Zebulon Pike in 1807, not only in the capacity of physicians, but because of an interest in the land beyond the Mississippi. The War with Mexico in 1846-48 brought the first Army Surgeons to the Southwest. Some remained in the centers of population and were employed by the mining operations. Others came after them because of training they had received in our own great Civil War. Some came for reasons other than medical — to stake claims — to ranch — to become proprietors of various business endeavors. But they came and lived in Arizona, and physicians have been carried on the census rolls of Arizona as early as 1858.

Arizona is and will always be Arizona; a land of many facets, great distances, superb beauty, unparalled climate, great mineral wealth and natural resources, and so located that it becomes the final destination not only for emigrants from both East and West, but also from the South. Basically Indian. The object of Spanish conquest from Mexico. The end of the trail for both Eastern and Western exploration.

This is the background of a book, "MEDICINE IN TERRITORIAL ARIZONA," by Frances E. Quebbeman of the University of Arizona in commemoration of the seventy-fifth anniversary of the Arizona Medical Association.

How the book was made possible is a story in itself adequately covered by Miss Quebbeman in her PREFACE. How it was written in such a relatively short time is an item of utmost amazement, for the author's Bibliography covers no less than ten divisions of research ranging from unpublished material and oral testimony to documents of the U. S. Senate and House of Representatives.

To quote the author: "MEDICINE IN TERRITORIAL ARIZONA can be considered only as a beginning in the exploration of a fascinating subject. Of the three thousand and more practitioners of medicine who came to Arizona during the territorial years, only a few hundred are named in the text of this study. Some twelve hundred are listed in an appendix and partially identified there. It may be said, then, that many fruitful areas of research remain open to scholars who would engage in continued investigation of medical history on this frontier."

1540 to 1891. Three hundred and fifty years. Three hundred and fifty years of records, some readily accessible, some buried by the natural attrition of time. One author. A deadline of March 1, 1966. Several years of research were performed before the book was even begun. The historical background of Arizona during the territorial years was a prerequisite. The writer completed courses in American History at the University of Arizona, stressing the Spanish heritage. The Arizona Frontier was brought into focus in the over-all history of the American

By Frances E. Quebbeman
Publishers: Arizona Historical Foundation.

West. National history and the political implication of territorial government were explored, and the study of European background provided wider dimensions to the particular happenings in Arizona. The medicinal properties of native plants and old prescriptions were verified. Ethnic backgrounds and the mining operations were researched and confirmed. Military operations and military history were substantiated.

The author has woven a tale of 350 years into twelve chapters. The chapters have reasonable division of content and manage to weave historical facts into a historical narrative. The chapters progress in this order:

I. Spanish Surgeons and Indian Shaman.
II. Medicine and Mule Trains.
III. Doctor, Miner, Indian Chief.
IV. The Doctor Comes to Town.
V. Surgical Challenges and Complications.
VI. Old Medical Foes on a New Frontier.
VII. Arizona as a Sanatarium.
VIII. Hazards of the Health Prospector.
IX. The Arizona Medical Association.
X. New Theories: Microbes & Mosquitoes.
XI. An Old Fortress Demolished.
XII. Epilogue.

The book is completed with the addition of the following:

Appendix I — Board of Medical Examiners of the Territory of Arizona. Examination given in October of 1897.

Appendix II — Biographical.

Bibliography — with the initial recorded document dated "1832."

To quote Miss Quebbeman again: "Arizona's climate attracted the health seeker from the beginning. Improved transportation brought the health prospector in greater numbers and the problem, as well, of how to prevent the spread of tuberculosis. The climate attracted not only the health seeking patient but the health seeking physician, many of whom possessed outstanding qualifications. Attracted also by the many health seekers were the charlatan and quack who promised ready cures for the diseases which baffled the serious minded physician."

Arizona physicians organized to rid the profession of the unqualified and to support a program of public health. Arizona physicians met, exchanged experiences, wrote papers, and weathered the changes dictated by germ pathogenesis.

MEDICINE IN TERRITORIAL ARIZONA documents not only the objectives of medicine itself in these early times, but the manner in which these objectives were accomplished. The book is readable, enjoyable, and historically accurate. One notes that many physicians have not been described in detail. Time, space in a book of this size, and the legalities relative to the documentation of personal quotations and experiences prevent this. The high-lights of the various medical careers have been fully stressed. Foot-notes and bibliography seem to be unusually complete. The book can be heartily endorsed not only as a historical narrative but as a primary reference work. We can sincerely hope that this is an organized beginning of a great story—the story of Medicine in Arizona.



Roland F. Schoen, M.D.



A. Ludwig Lindberg, M.D.
1894-1965

A. Ludwig Lindberg, Tucson therapeutic radiologist and pathologist, died at St. Mary's Hospital on November 29, 1965, at the age of 71.

He was born in Evansville, Minnesota, on April 2, 1894. He moved to North Dakota where he received his secondary education. He attended the University of North Dakota for one year, and then interrupted his education to teach school in Saskatchewan, Canada. While in Canada, he also worked for the Beaver Lumber Company. He returned to the University of North Dakota and received his B.S. and B.A. degrees in June, 1925. He next attended Rush Medical College and received his M.D. degree in 1927. His internship was served at the Swedish Hospital in Seattle, Washington. In 1928, Dr. Lindberg returned to North Dakota and was appointed Assistant Director of the U.S.P.H.S. Laboratory for one year. He was a fellow in pathology at the Mayo Clinic from 1929 to 1931. In 1931, he joined the Soiland Cancer Clinic in Los Angeles, California, where he practiced until 1937, when he moved to Tucson, Arizona. For some time he was pathologist at St. Mary's Hospital, and for the past twenty years has specialized in oncology and therapeutic radiology, culminating a lifetime ambition of treating patients with cancer.

Dr. Lindberg held a commission as Lt. Commander in the Naval Reserve as physician and surgeon from 1935-1941.

He was a diplomate of the American Board of Radiology, a certified member of the American Radium Society, a member of the North American Radiological Society, and a member of the Pima County Medical Society of which he was president in 1945.

Dr. Lindberg served on the staffs of the Pima County Hospital, St. Mary's Hospital, St. Joseph's Hospital, and the Tucson Medical Center.

Dr. Lindberg is survived by his wife, Alice; a son, Dr. Robert Lindberg of Houston, Texas; a daughter, Mrs. Marie Antonuccio of Tucson; and five grandchildren.

Inasmuch as Dr. Lindberg was both pathologist and radiologist he had the rare ability to both diagnose and treat tumors. His position in Tucson medicine will be hard to fill. He will be greatly missed by the many who came to him not only from wide areas of southern Arizona and New Mexico but from south of the border as well.

Donald G. Griess, M.D.

Robert P. Watterson, M.D.
1917-1965

Robert Percy Watterson, age 48, died in a small fire in his sauna bath at home on December 9. By this unfortunate happenstance Arizona was denied a most remarkable and dedicated physician. His chief interest lay in arthritis and geriatrics, and he was one of a small but enthusiastic group of physicians scattered about the country who are interested in "physiologic medicine," or promoting the biochemical physiologic defense mechanisms in the treatment of collagen and degenerative disease.

Medicine was to him a fascination and a passion. His notion of a vacation was to spend a week flying about the country visiting other physicians and biochemists with kindred interests. His enthusiasm carried him around the world in 1962, exploring the medical byways of Japan, India and western Europe.

In 1963 he worked in Japan with a well known investigator on porphyrin metabolism. He had volunteered for civilian service in Viet Nam and was waiting this call at the time of his death.

He went to medical school at Iowa University, finishing in 1942. He spent the next five years in the navy, becoming chief flight surgeon in the Seventh Fleet. Bob then took up general practice in the small town of McPherson,

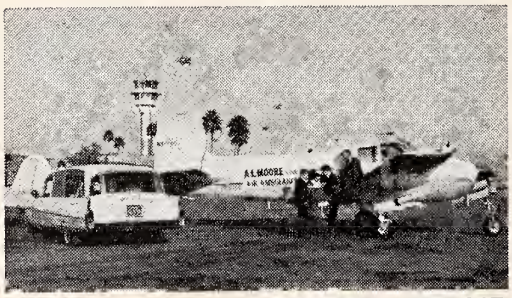
Kansas, for eight years. Here he became so consumed with an interest in arthritis that he moved to Scottsdale, and limited himself chiefly to collagen diseases and geriatrics.

He treated the rich and the poor alike. I have known him to see indigent patients who could afford neither food or drugs, and instead of referring them to some government agency, took them home with him and kept them for weeks, furnishing all food and drugs gratis. I have also known Bob to make a house call on a poor and bedridden patient and give the patient twenty dollars from his pocket.

His enthusiasm for treating the endstage, ankylosed arthritic was infectious. His patients literally came from every state in the Union to see him. Any good doctor develops a coterie of faithful fans, but Bob had the largest number and the most faithful I have ever seen. He wanted to retire and devote most of his time to research last year, but because of patient demand built a small office in his home and continued to be as busy as ever. He established the Scottsdale Medical Research Foundation, a non-profit organization to provide other practising physicians with funds for private research projects. He has written and had published many papers on porphyrin metabolism, chronic lead intoxication, and arthritis. In recent years he has been in some demand as a speaker to medical groups in other parts of the country. To his colleagues and his patients he will not be forgotten.

William K. Helms, M.D.

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Complementary "Z"

"The development and marketing of a new coverage to complement the government's Medicare program has been an undertaking of considerable magnitude during the forepart of the year," stated John C. Foster, Executive Director of Arizona Blue Cross/Blue Shield.

The new program is now being offered to Arizonans 65 years of age and over, and is known as Blue Cross/Blue Shield Complementary "Z" coverage.

The new Blue Cross/Blue Shield "Z" program will go into effect on July 1, 1966, being synchronized with the start of the Medicare program. Blue Cross "Z" pays the first $40 not covered by Medicare "A" for each spell of illness in a Participating Hospital; plus the $10 per day from the 61st to the 90th day of hospitalization not covered by Medicare "A" (this could amount to as much as $300 during a spell of illness). "Z" coverage also provides an additional 60 days beyond the original 90 days under Medicare "A" for each spell of illness with such full benefits as a semi-private room, operating room, medicines, oxygen, X-rays, etc. Additionally, Blue Cros "Z" provides emergency care and hospital expenses for minor surgery as a hospital outpatient, which is not covered under Medicare "A". The member is entitled to a $50 allowance under Blue Shield "Z" each calendar year (January 1) for eligible medical-surgical expenses while an inpatient.

"In adding these benefits to fill out the Medicare program, we have been able to price it at $4.80 per month per individual. All presentBlue Cross/Blue Shield members, 65 and over, may transfer from their present coverage to the new Complementary "Z". Complementary "Z" is also available to people not presently enrolled in Blue Cross/Blue Shield. Currently there is an open enrolment period for these people to select Complementary "Z", at which time there will be no waiting periods for anyone enrolling," added Foster.

It was further pointed out that all people wishing to enroll for Medicare Part B, which is for physician services, must indicate this desire with the Society Security office. Part A is automatic and is paid for through Social Security. However, under Medicare Part B, the applicant must indicate his desire to enroll and pay $3.00 a month.

"If a person over age 65 has not enrolled in Part B as yet, it is our recommendation that they do so, so they will be able to round out the program fully," added Foster.

"We hit on the idea of Complementary "Z" because with the government's Medicare program having Parts A and B, we thought it would be a good play on the alphabet – Coverage from "A to Z" for Arizonans age 65 and over," stated Foster.

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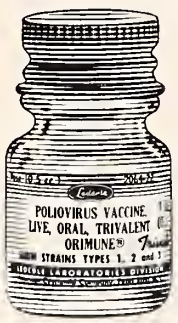
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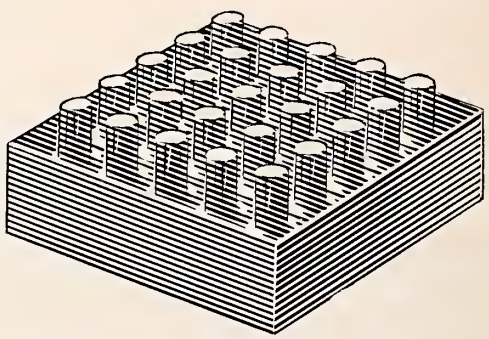


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(Also available in 2 cc and 2 drop dosage forms).
Only 2 doses required for complete, initial immunization for patients more than a year old.

Effectiveness—may be expected to confer active immunity against all three types of poliovirus infection in at least ninety percent of susceptibles only if given at full dosage, as directed. No characteristic side effects have been reported. There are, however, certain contraindications. These are, broadly: acute illness, conditions which may adversely affect immune response, and advanced debilitated states. In these, vaccination should be postponed until after recovery.
In infants vaccination should not be commenced before the sixth week of life. Do not give to patients with viral disease, or if there is persistent diarrhea or vomiting. ORIMUNE and live virus measles vaccine should be given separately.
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*Rosenthal, S. R., Nikurs, L., Yordy, E., and Williams, W.: Scientific Exhibit Presented at the Annual Meeting of the National Tuberculosis Association, Chicago, Illinois, May 30-June 2, 1965.

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EARLY MEDICAL PRACTICE IN ARIZONA

When I came to Arizona in 1919 the big copper mines were mostly underground operations. In the Ray mines up until 1920 the long trains of five ton ore cars were hauled by electric locomotives. In the low ceilinged drifts there was not much room and over the years there were one or two deaths of a motorman or brakeman due to contact with the overhead trolley. From 1920 on all trains were hauled by compressed air locomotives. Accidents thereafter were usually due to blasts, falling rocks, individuals' errors or train collisions even though there was in operation a block system such as railroads have.

In anticipation of accidents in this hazardous work first aid teams were ready at all times. They were trained by the safety engineer and had at all levels of the mines and on the surface all necessary equipment, including resusitation machines. The hospital was near the main hoist shafts, an ambulance was ready at all times and when an accident occurred one of the doctors was dispatched to the area at once.

The first aid team usually had the laborer dressed, splinted and strapped into a metal stretcher by the time the doctor arrived. Often no changes were required but where needed the doctor did what was necessary. Opiates were given freely when needed. Sometimes when a man was still partially buried in muck a second doctor arrived to aid, and the entire crew worked until the man was freed.

Until World War Two seriously depleted our staff of doctors and nurses we had a good operating team, surgeon, anesthetist, assistant doctors and operating room nurses. If the injuries were of such a nature as to require the services of a specialist, and the patient was transportable, he was moved to Phoenix or Tucson for care by such doctor. If he could not be moved we could in many cases get the doctor to come to our hospital. In more recent years the doctor was flown in if haste was imperative.

Most of the mines were dusty so we had installed at the open ends of many drifts large exhaust fans. This kept the air clear, even soon after a large blast.

In the mid twenties we had one very disastrous mine accident year. There were ten accidental deaths, nine underground, one on the surface. Eight of these died almost instantaneously, two got to the hospital, one too late to be helped, the other, with multiple leg fractures later went back to work underground. In all the years before and for many years since there have been few if any deaths. And since 1950 when all underground operations were stopped and a large open pit formed there have been many months at a time without even a serious accident.

In the mid twenties, the Industrial Commission of Arizona was legally created. This was a tremendous step forward for industrial accidents in Arizona. The State Mine Inspector and his deputies made regular inspection trips and were called in for all serious cases. Claims were thereafter settled fairly for the laborers, for the doctors, and for industry.

Otto E. Utzinger, M.D.

OLD METHODS OF TREATMENT

The changes that have taken place have been so gradual that one becomes accustomed to the new and forgets the old. It is difficult to think of them all. According to his specialty, each one would see many changes. As a G.P., I can think of my daily work now and as it was. We might think first of our drugs or medicines as an easy way to start. All know that we had no penicillin, sulfonamides or antibiotics — think of what a handicap now. Question here — what did we use? Answer: Everything in the book of Pharmacology & Therapeutics. Our Professor one day asked the Class — if one had only one drug to use, what would he choose? The answer was Opium.

For general anesthesia, ether was most commonly used by the open mask (Allis) and drop method; chloroform and nitrous oxide (laughing gas) were frequently used for short work, the latter often by dentists. As a starter for children, tonsils, etc., ethyl chloride was dropped or sprayed on a low mask. Procaine was used for locals.

In the treatment of the common universal diseases, viz: tuberculosis, there were no specific medicines. Bed rest, fresh air and sunlight, as practiced at Saranac Lake, codliver oil and as much food as possible, were the things to do. Phrenicotomy, penumothorax and pneumoperitoneum were used to compress the lung. Syphilis was treated with mercury, orally if tolerated, or by inunction with the old blue ointment on soles of feet or legs; later by bismuth and arsenic, the former IM and the latter IV. The old '606' was considered great and then Salvarsan and Neo-Salvarsan and finally, Mapharsen, which was very good and not hard to give IV. One drawback I remember. An occasional patient would vomit during or after the IV. I have seen 'ladies' mess up a dress when they came for treatment on a full stomach. It was always given with the patient lying down. Gonorrhea was common enough in mining camps to have a special treatment room in the hospital. Medicines were silver and potassium permanganate; the former by injection of the mild salts — mostly argyrol 25% solution daily with a blunt nose Luer to the anterior urethra only; when the discharge ceased, we irrigated with the permanganate solution — very mild. The patient lying on a drainage table would have the bladder filled from an overhead container, tube and glass blunt nose tip. There was enough pressure in the container to run the solution into the bladder with the patient relaxed. When full, the fluid was allowed to run out. This often required a long period of treatment.

Pneumonia, which was common, was treated at first with nothing in particular except careful nursing. The main thing was to watch for the Crisis and sustain the patient during that depressive stage with digitalis, etc. Later, we were advised to type the sputum of each patient and get the specific serum. This was done for quite some time.

For diptheria, we had the antitoxin; however, tracheotomy was not uncommonly necessary. For scarlet fever, we had nothing specific. It, with its complications, nephritis, facial paralysis, cervical adenitis and mastoiditis, was bad. Mastoid operations were fairly common and even without scarlet fever, otitis media which we seldom see now, was common, often requiring paracentesis tympani. Typhoid took three weeks of careful nursing, and the tedious job of tub baths with a temperature above 103. At first, a restricted diet was used, but in later years more food was given. There was always the fear of perforation and occasionally a patient would have a relapse of another three weeks. We seldom see those things now.

The Murphy button for intestinal anastamosis was in vogue and the Murphy drip and hypodermoclysis of normal salt were common practice for dehydration. Gastric suction was accomplished with the double bottle water flow. Vascular infusions were not yet used. Blood transfusions were done by direct or indirect methods, and both were painstaking procedures. Surgeons would be lost nowadays without our blood banks and the various serum substitutes in shock, burns, hemorrhage, etc.

After scrubbing for surgery, the hands were submerged in a basin of bichloride of mercury solution and another of dilute alcohol or sterile water. Gloves were often put in a basin of water —glove filled and hand inserted. Bichloride solution was freshly prepared every day in the treatment rooms for cleansing wounds. In the hospital treatment of infected wounds, the Carrel-Dakin solution was often used by the continuous irrigation method with multiple glass tips. We made up the solution in the hospital— sodium hypochlorite, etc. The Lane plates for fractures had come into use and the Lane technique for doing home surgery. The Steinman pins and Kirschner wires for skeletal traction were in use. However, the various Thomas splints and Balkan frame were also used; and the various other types of traction, as the Russell for the thigh. This was a long ordeal for the patient. Then hip nails or pins gradually came along and the elderly patients gotten up as soon as possible, whereas before, they lay in bed and died, with loss of weight, decubitus, etc. — a lot of nursing care.

Obstetrics or deliveries were done in the home; no one went to the hospital unless there was something wrong. Bags were kept packed and ready, brought back and turned over to the nurses to be cleaned up and repacked. Often, the patient had never seen any doctor and again, a midwife or neighbors had been called but could not proceed with the delivery. Often, no one could speak English and there were lamps or candles for light. I have been where there

were no beds—just blankets on the ground. These were the newcomers to a very active mining town. Every habitable spot was occupied.

A 9-year-old boy came in to town with his family and broke out with smallpox. They kept him hidden in a house but soon, other cases showed up. This was in April and May. The town was searched for cases. An extra large Company house in a suitable canyon below the town was fixed up for a "pest" house and all cases were taken there. Volunteers who had been vaccinated willingly came in to help. Before it stopped, we had 60 cases and, as I remember, about 14 deaths.

During the awful flu epidemic of October 1918, the town was quarantined and no one was allowed away from home without a face mask. I have forgotten the total number of cases we had, but as many as 10 or 12 would die in a single day. The biggest and strongest died the quickest. As I remember, every pregnant woman died. We had many willing helpers with all the work. There was no specific medicine. Whiskey was used freely. Pneumonia, fast and furious, was frequent.

Gallbladders were usually drained for stones or inflammation rather than removed. Calomel and rhubarb were common treatment for sluggish liver. Santal oil was used for cystitis. Buchu, Juniper and Potassium Acatate were used for a diuretic; Urotropin for urinary antisepsis; Viburnum compound for dysmenorrhea. Quinsy (subtonsillar abscess), fairly common in cold weather, was best treated by incision when fluctuation was evident by index palpation rather than wait for spontaneous rupture. A puncture incision directed posteriously between the last molars would avoid large vessels.

Hemorrhoids and varicose veins were treated with sclerosing agents. We had the Sippy treatment for peptic ulcers, digitalis for hearts, quinine for malaria, bismuth and paregoric for diarrhea, ammoniated mercury ointment for skin infections, iodine and mercurochrome for wounds, and alkalis, cream and starch for rashes. Copper sulfate for trachoma was used extensively in the Indian Service.

Frequently, in an old dispensary, one will see many medicines that were in common use then and are still good remedies, but outmoded, today.

James M. Walsh, M.D.

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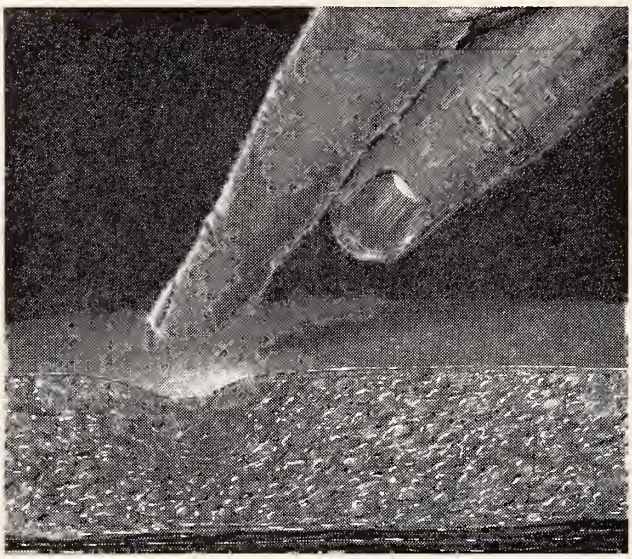


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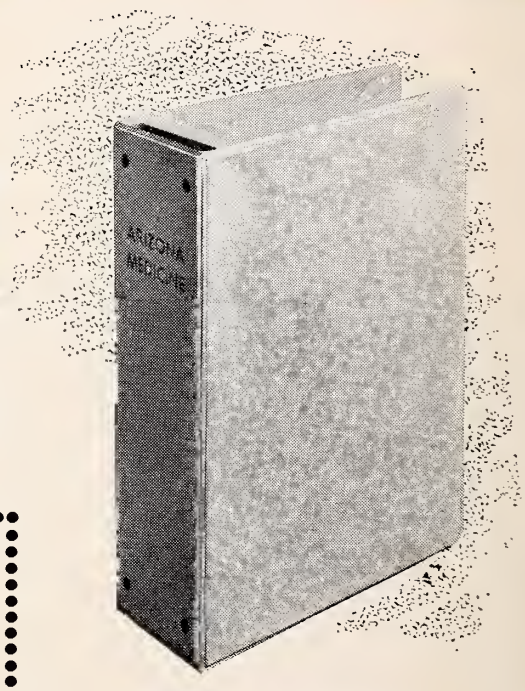
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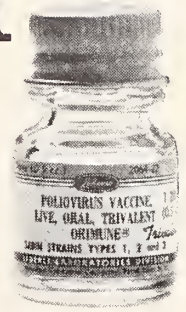
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1. Collective studies, Department of Medical Research, Winthrop Laboratories.

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Arizona Medicine

JOURNAL OF ARIZONA MEDICAL ASSOCIATION
MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

May, 1966
Vol. 23, No. 5

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Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea and sulfonamide-type agents and insulin. Patients receiving such concomitant therapy should be carefully observed for this effect.

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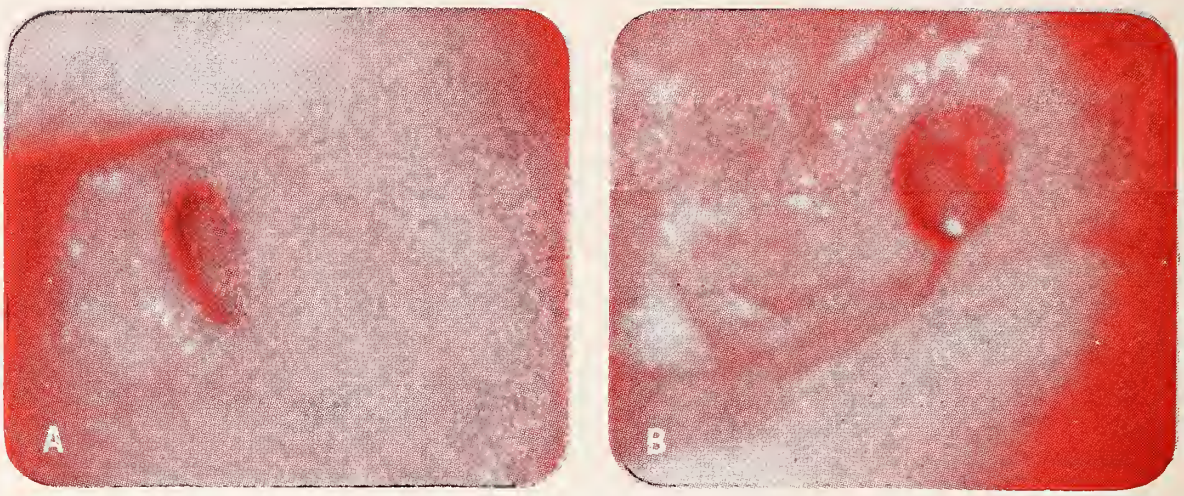
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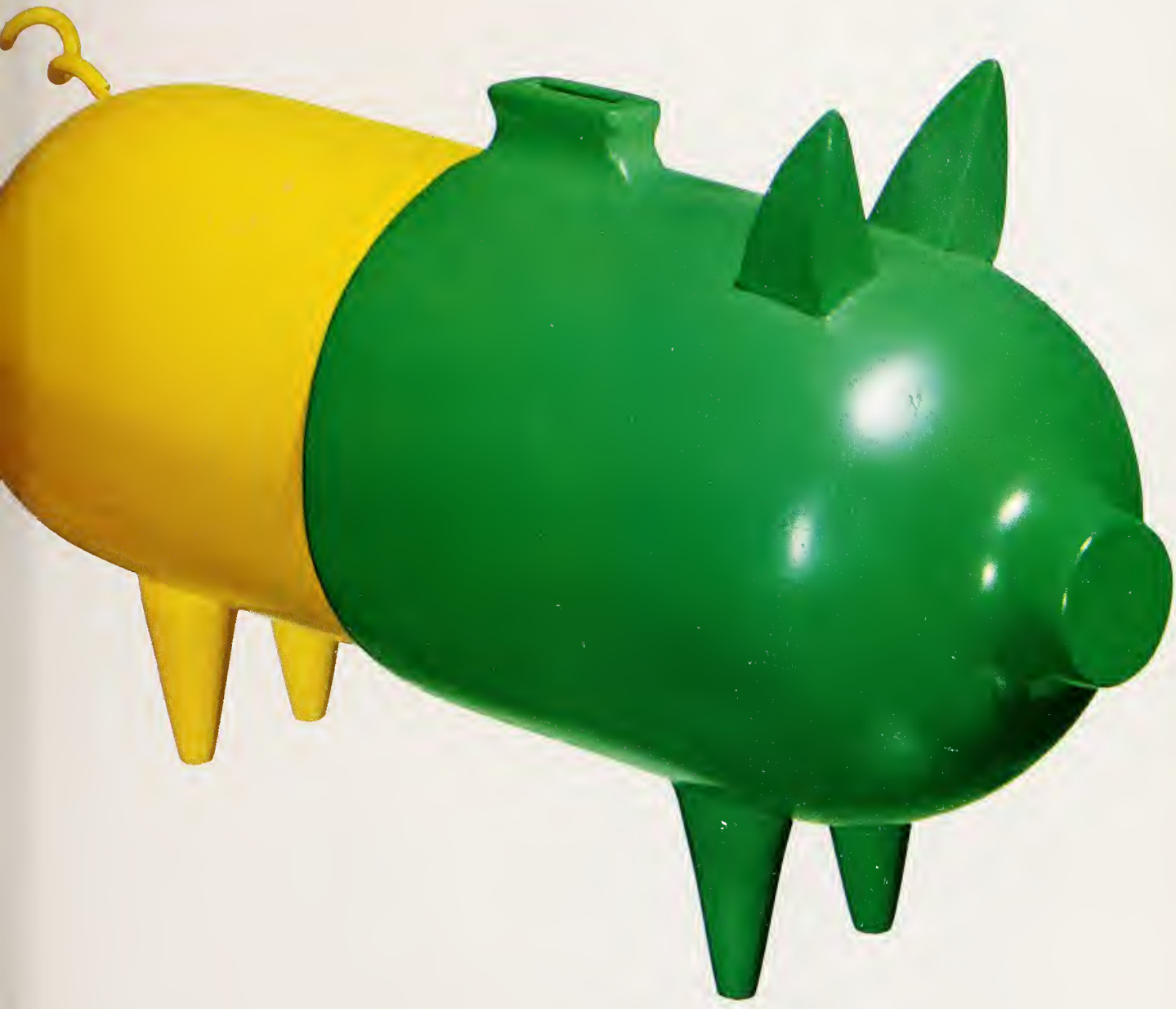
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Photographs—Harry Barowsky, M.D., Lawrence Greene, M.D., and Robert Bennett, M.D., from a Scientific Exhibit presented at the Annual Meeting of the American College of Gastroenterology, Bar Harbour, Florida, Oct. 24-27, 1965.

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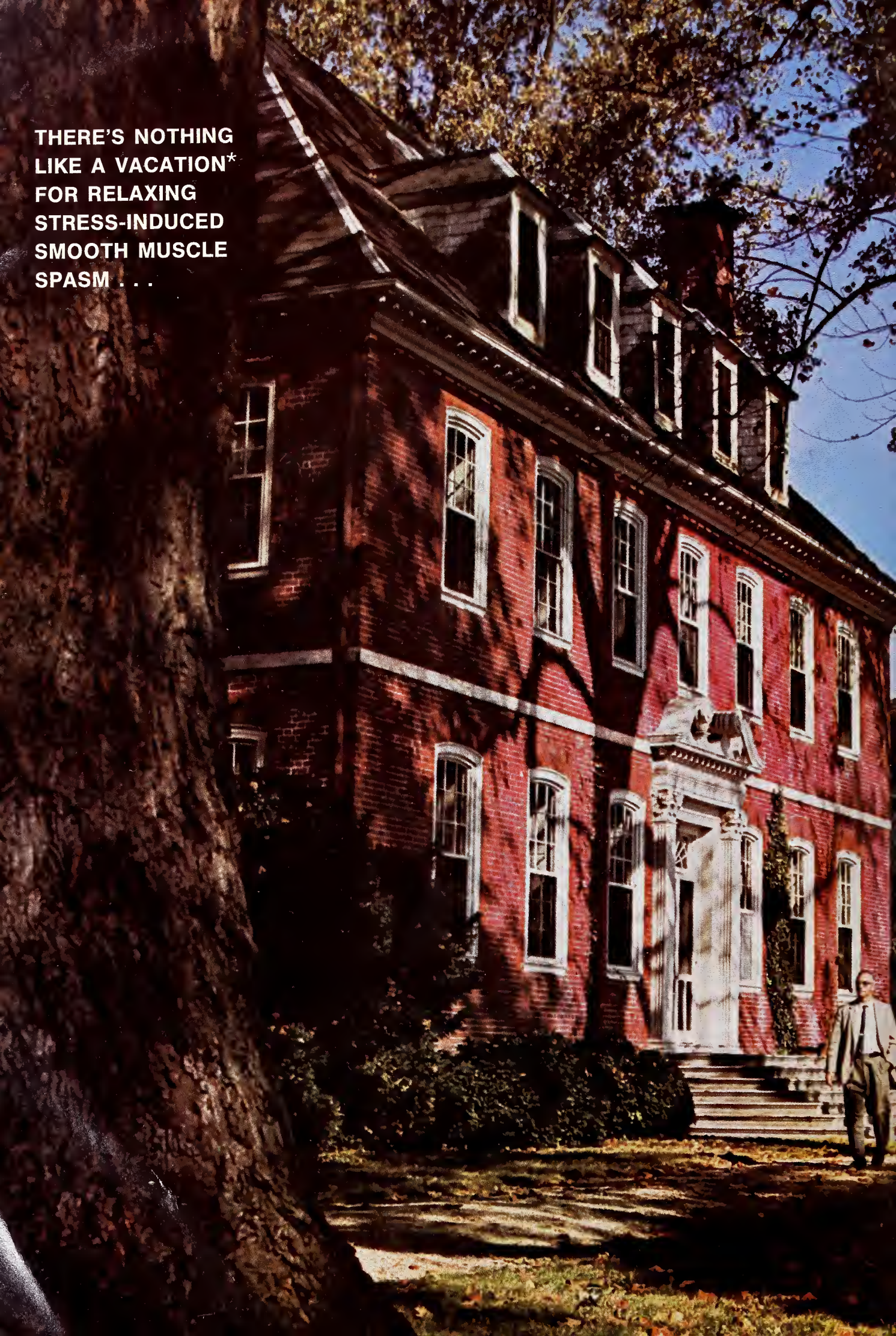
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phenobarbital	(3/4 gr.) 48.6 mg.

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BRIEF SUMMARY: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma, or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease, or a hypersensitivity to any of the ingredients.

REFERENCES: 1. Vollmer, H.: Arch. Neurol. and Psychiat., 43:1057, 1940. 2. Morrissey, J.H.: J. Urology, 57:635, 1947. 3. Krantz, J.C., Jr., and Carr, C.J.: Pharmacological Principles of Medical Practice, 2nd ed., Baltimore (1954), 552.

*This one at Westover, elegant Colonial Virginia plantation, located on the James River near Richmond. Built in the early 1730's by William Byrd II, founder of Richmond, it is now the home of Mrs. Bruce Crane Fisher.

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PROFESSIONAL COMMITTEE

Meeting of the Professional Committee of The Arizona Medical Association, Inc., held Sunday, January 30, 1966, in the Convention Center of the Safari Hotel, 4611 North Scottsdale Road, Scottsdale, Arizona, convened at 10:20 A. M., Jack E. Brooks, M.D., Chairman, presiding.

ROLL CALL

PRESENT:

Members: Drs. Brooks, Jack E., Chairman; Fife, Ray; Frissell, Ben P.; Gregory, T. Richard; Henderson, Charles E., Secretary; Jarrett, Paul B., President-Elect; Landeen, Fred H.; Melick, Dermont W.; Payne, William G.; Steen, William B.; Wagner, Albert G.

STAFF:

Messrs. Carpenter, Robert, Executive Secretary; Robinson, Bruce E., Assistant Executive Secretary.

GUESTS:

Drs. May, Derald G., Chairman, Legislative Committee, Arizona Psychiatric Society; Moore, William J., Commissioner, Arizona State Department of Health.

EXCUSED:

Drs. Baker, Earl J.; Kohl, Jr., Harold W.; O'Hare, James E., President; Wood, MacDonald.

MINUTES

Approved Minutes of the Professional Committee meeting held July 25, 1965.

WELCOME

The Chairman welcomed Dr. Albert G. Wagner (Phoenix), recently appointed member of this Committee, who will assume the chairmanship of the Subcommittee on Medicine and Religion; also, Dr. William B. Steen (Tucson), who will assume the Subcommittee chairmanship on Federal Services; and while Dr. MacDonald Wood (Phoenix) likewise appointed a member of this Committee, who has been unable to attend this meeting due to prior commitment, will serve as chairman of the Subcommittee on Safety.

SUBCOMMITTEE REPORTS

Aging

AGING AND AGED — Dr. Landeen reported that he was unable to attend the meeting of the Gerontology Branch of the Division of Chronic Diseases of the Public Health Service held Wednesday, August 4, 1965, at the Community Services Building, Phoenix. This meeting was called in an attempt to secure an inventory of State and local resources available to meet health needs of the aging and aged in all of the States. It was indicated Commissioner Moore was in attendance.

Another meeting was held in San Francisco December last relating to Nursing Home Care.

A conference on aging and long-term care, sponsored by the American Medical Association, Committee on Aging, in cooperation with the State Medical Associations of Arizona, California, Idaho, Nevada, Oregon, and Washington, is scheduled to be held in San Francisco February 10th and 11th, 1966. Dr. Landeen stated that he will be in attendance as a participant of this program. Question was raised as to policy of the Professional Committee regarding payment of expenses for those authorized to attend specifie meetings.

DR. BROOKS: "Last year, the Committee on authorization of the Board of Directors, paid the expenses of one member attending an approved meeting. This is a large Committee. There appears to be meetings most every week. If we finance expenses for all attending approved meetings, we would soon exhaust our budget. Possibly we can afford partial payment of a few."

Commissioner Moore stated that probably within the next couple of weeks the Governor will designate a Commission on Aging. This Commission will report to the State Department of Health any recommendations it has. The Health Department rather than the Welfare Department has been designated to administer the Older Americans Act.

REPORT ACCEPTED.

Allied Medical Groups

DRUG DISPOSAL

DR. PAYNE: "You will recall the subject discussed at our last meeting dealing with the problem of drug disposal and their salvage for needy patients. This matter was brought to the attention of the Professional Committee by the Pima County Medical Society. Also, the matter of providing for a minimal supply of drugs including narcotics for prescription by the doctor of medicine on an "emergency" basis for patients in either a nursing home or a first-aid station of an industrial facility was likewise involved. The cooperation of the Arizona Pharmaceutical Association was sought and by letter dated October 28, 1965, it had this to say: 'The medical liaison committee's recommendations, in which our executive committee concurred, is that we must refuse the request made in your August 10 letter. If we complied with this request, we would act in violation of Arizona State Pharmaceutical laws as well as the pharmacists' Code of Ethics. Furthermore, we do not believe that current pharmaceutical laws should be changed. We are not willing to seek any modifications in statutes or seek to change present regulations as we do not believe your request is in the interest of public health and safety.' While our Committee is not in agreement with this conclusion, having the interest of the patient foremost, possibly for the present we should drop the matter, but not forget it."

ARIZONA BAR LIAISON

The Chairman (Dr. Brooks) was authorized to contact Mr. Roger Perry, liaison chairman of the Arizona Bar, for an informal discussion to determine scope of proposed meeting and subjects to be included on the agenda.

SCHOOL NURSE CERTIFICATION

Arizona State Nurses Association seeks support of this Association in legislation to be submitted during this session of the State Legislature (HB 40 - SB 105) relating to the improvement of health and education in Arizona permitting the State Board of Education to set standards for certification of registered nurses employed by District School Boards as school nurses. Introduction of such legislation is considered premature. It is understood the educators have not been brought into the discussion. Possibly this Association could be the means of bringing together the interested parties including the Universities and Colleges of Arizona, the Arizona Educational Association, representatives of the American

Health, Physical Education and Recreation Association, the Arizona State Nurses' Association and this Association, acting as a sort of catalyst, lending leadership in the field of health of our children. The Chairman is directed to give thought to this proposal and report at the next meeting.

ASNA LIAISON

Dr. Payne reported that liaison between this Association and the Arizona State Nurses' Association is proceeding effectively and that the atmosphere has been cleared appreciably.

Federal Services

KERR-MILLS — MEDICARE — TITLE 19

Commissioner Moore reported on the status of Kerr-Mills legislation enacted last year and presented and read from his memorandum on "Medical Assistance Programs," dated December 27, 1965, prepared primarily for the Arizona State Legislature, relating to an apparent "sleeper amendment" in Title 19, which appears to pose a threat to the quality of medical practice in a State as to the cost of administering a welfare medical program.

Legislation is presently being considered to take care of the "medically indigent." One proposal considered early by the Welfare Department, was to use Kerr-Mills funds to "buy in" to the co-insurance features of Title XVIII-B, and to pay for deductibles for the "medically indigents" and possibly OAA recipients. It seems unlikely that such use of Kerr-Mills money will be allowed as being within the intent of KM legislation. If this be true, KM legislation cannot be integrated with any of the provisions of the insurance programs of Title XVIII, Parts A or B. It can, however, be replaced by Title XIX, but the immediate costs are not definitely known and future costs are difficult, if not impossible to predict with any degree of accuracy. Interpretation of the Federal Medicare Act is that to spend of KM money now or after July 1, 1966, would greatly increase the cost of any future medical assistance program under Title XIX.

In order for the 13,200 OAA recipients in the State of Arizona to benefit from Title XVIII, Part B, by July 1, 1966, provisions must be made this fiscal year, for payment of the $3.00 monthly co-insurance cost for the Medical Insurance Plan for the first quarter of fiscal year 1966-1967 prior to April 1. This initial cost will be $117,000.00. By July 1, 1966, provisions must also be made to pay the total deductibles and co-insurance cost for Title XVIII A and B, in the future for the OAA recipients. Total annual cost estimate $1,320.000.00 (the present cost of medical and hospital services for OAA recipients amounts to 25 to 30% of the total hospital and medical services budget of 11.2 million dollars for all counties, or 3.08 million dollars). The number of "medical indigents" as defined in the current KM law is presently estimated to be 21,000. A majority of this group may be able to meet at least part of the co-insurance cost and deductibles under Title XVIII A and B by their own means. The total cost of co-insurance and deductibles is estimated to be $2,100,000.00.

It was determined that the Subcommittee on Federal Services will get together with Commissioner Moore the latter part of next week and review proposed legislation to take care of the "medically indigent."

SELECTIVE SERVICE REJECTEE REFERRAL PROGRAM

Commissioner Moore reported that between the period September 23, 1965, and January 25, 1966, out of 1,000 "rejectees," 94% have volunteered for the Selective Service Rejectee Referral Program. About one-half of this group were disposed of following personal interviews. Among the closed cases, one-half presented documentary evidence indicating adequate current care or control by the family doctor; one-quarter have conditions that do not require any additional care; and about one-quarter declined participation. About two-thirds of the referrals have been with family doctors or to private physicians in the rejectee's home town. In Arizona, the bulk of the non-private referrals are indigent boys who by agreement are referred to the health service unit of the State. It is stated that 70% of the boys who are referred to their family doctor get under care immediately and stay under care, while only 30% of those that are referred to the non-private physician get under care and stay under care. Of the Arizona rejectees, 90% are disqualified for physical reasons alone; only 6% for psychiatric reasons; 4% for physical and psychiatric problems; and 30% of all the youngsters examined are rejected. These are the "rejectee" statistics. Of the total number examined, 30% are rejected for physical or psychiatric conditions; 8% are rejected for failure to pass the IQ test; 81% of all rejectees have more than one disqualifying condition; 42% have disqualifying conditions due to defects of the eye; 32% have conditions of the ear; 26% have allergy and metabolic diseases; and 16% for obesity.

MEDICARE — AHA — SPECIALISTS — UTILIZATION COMMITTEES

Dr. Steen reported meeting with the Arizona Hospital Association October 13, 1965, at which time consideration was given to the Medicare Program. Utilization Committees were discussed, whether to be appointed within the hospitals or through county medical societies. Relationship between hospitals and nursing homes and the home health care program was reviewed. The certifying agency of both hospitals and nursing homes is, of course, the State Health Department in this State. Billing for in-hospital services rendered by pathologists and radiologists likewise was discussed and several suggestions offered as to solution of this problem. The AMA House of Delegates has taken a position that these specialists should establish, bill, and collect their own fees for the physicians' professional service in the same manner as other physicians and that the physicians should not permit hospitals as their agents to bill and collect on their behalf.

Dr. Brooks presented and read a letter received from Dr. J. Garland Wood, Jr., President of the Arizona Radiological Society, reporting adoption of a resolution in November, 1965, dealing with the separation of professional fees and hospital charges. Briefly stated, "it is the policy of the Arizona Radiological Society that the members of the Society shall separate their professional fees from hospital charges and present their own bill to patients expected to pay for services." This Committee is urged to sponsor a similar resolution and present same

to the House of Delegates of the Arizona Medical Association at its annual meeting in April next. It was determined to communicate with Dr. Wood by letter advising him that this Committee has considered the resolution and that it suggests he follow the usual avenues in introduction of a resolution before the House of Delegates.

Approved appointment of members to the Federal Services subcommittee to include Dr. Hayes W. Caldwell (Phoenix), Dr. Clarence E. Yount, Jr. (Prescott), and Dr. William J. Moore (Phoenix), Commissioner, Arizona State Department of Health, the latter ex-officio. It was suggested that a surgeon be similarly appointed.

Dr. Brooks stated that there appears no unanimity in this State as regards appointment of a "carrier" in administration of the Medicare Program, Part "B". It is understood that the Board of Directors of ArMA recommended Blue Shield; Maricopa County Medical Society's Medicare Committee recommended a private insurance company; and many specialty organizations, it is understood, are forwarding letters to HEW similarly recommending a private insurance company.

General Medicine

In the absence of Dr. Kohl, Dr. Brooks reported that there appears to be no further action indicated as regards Guides for Medical Care in Nursing Homes and Related Facilities. Commissioner Moore stated that these Guides were mailed out to all Nursing Homes in Arizona through his office as previously requested. Continuing, Dr. Brooks stated that Dr. Kohl was to have reported on Diabetes Week (November 14-20, 1965), associate with the detection drive; that the Guild of Prescription Opticians submit a policy statement endeavoring to smooth things over as regards their previous position on Congressional Bill No. 2568 attempting to legislate against ophthalmologists dispensing glasses, wherein it is stated that there has been a misunderstanding and they recognize that the ophthalmologist who is in a community where there is no optical house, be allowed to dispense glasses, but otherwise, they feel it is in the public interest that the optician should do the dispensing; and that the Maricopa County Nutrition Council of Phoenix call attention to its sixth annual seminar and forum to be held Tuesday, March 15, 1966, at the Ramada Inn in Phoenix.

Industrial Health

REHABILITATION

Dr. Fife reviewed an interchange of correspondence between him and Dr. Palmer Dysart, State Medical Consultant, Division of Vocational Rehabilitation, State of Arizona, relating to "Rehabilitation Services." Arizona doctors should be constantly reminded of the availability of this service and organized medical groups should be encouraged to furnish and maintain up-to-date directories in their respective communities.

Dr. Brooks referred to Dr. Fife a memorandum, report on activities of Occupational Health Committees in other States, distributed by AMA, requesting review and report at the next meeting.

Medical Education

POST-GRADUATE EDUCATION

Considerable thought has been given to television programming. New Mexico has taken quite a lead in this particular effort. It was determined to await results particularly since it is understood federal monies will be available under the Heart-Cancer-Stroke program. It is also quite possible that a central television station at the University of New Mexico Medical School might develop in which event Arizona might be able to benefit thereby at considerably less cost. The chairman of this particular activity, Dr. Samuel J. Grauman, recently passed away and reassignment will follow.

U OF A MEDICAL SCHOOL

A Professor of Medicine has been appointed, Dr. Oscar A. Thorup, Jr. Receiving his Doctor of Medicine degree from the University of Virginia, he was assistant to the dean 1953-1962, currently Director of the Hematology Training Program and Hematology Clinic at the school and is a certified internist. The Board of Regents has determined to receive bids for the construction of the basic science building to be completed in mid-1967 which will result in meeting the schedule of receiving the first class in September 1967.

U OF A CONTINUING EDUCATION

L. L. Darcy, Dean, Extension Services, of the University of Arizona, proposes a one-day meeting of doctors and medical administrative personnel throughout the State. Its purpose would be to update attendees on tax problems, medical office administration, government policies, medical jurisprudence, and other subjects of current interest to the medical profession. If sufficient interest is indicated, a panel of nationally known experts can be obtained to conduct the program. It would appear such program is good; however, it should be made available in both the Phoenix and Tucson areas. The subject was discussed in a recent meeting of the Medical Economics Committee and suggestion offered that possibly the Scientific Assembly Committee might be interested. It was then reported that the subject would be on the agenda of the Professional Committee meeting today and in all likelihood it would be considered by the Medical Education Subcommittee.

MEDICAL EDUCATION CONGRESS

The Sixty-second Annual Congress on Medical Education, sponsored by the AMA Council on Medical Education, will be held in Chicago February 3 through 8, 1966, with headquarters at the Palmer House. While this meeting is primarily for medical educators, all interested doctors of medicine are invited.

Medicine and Religion

Dr. Delbert L. Secrist (Tucson) being unable to complete his term as chairman of this subcommittee, Dr. Wagner has been asked to serve as interim chairman.

Dr. Wagner stated that the AMA Department of Medicine and Religion is undoubtedly the youngest of the departments. Its purpose is to create the proper climate for communication between the physician and the clergyman which leads to the most effective care and treatment of the patient. To achieve this purpose, the department is working through physicians of the county medical societies to establish contacts with the clergy and is directing studies in areas where there is continuing correlation between medicine and religion. Established in 1961, review of the history of the organization under the leadership of the Reverend Dr. Paul B. McCleave, Director of the program, its progress and

accomplishments to date and visitations to both Tucson and Phoenix were outlined. Robert F. Etheridge, of the Field Service Division of this AMA Department, has been assigned to this area. Films are available, one by the title: "Not By Bread Alone," are being shown; likewise, brochures have been prepared and are being distributed.

Meetings have been scheduled and are being attended. Last year, Dr. R. Lec Foster (Phoenix, representing Arizona) attended a workshop in San Francisco; in March Dr. Wagner attended a Convocation on Religion and Health at the Tempe Methodist Church by a team from the Methodist Hospital and Southern California Methodist Hospital attended by ministers of the Methodist Church and doctors; likewise in March, Paul Strickland, Chaplain of the Arizona State Hospital, held the Fifth Annual Clinic for Clergymen. Interested clergymen and doctors were invited and the Sixth Annual Session will be held next week. Meetings of the Ministers-Doctors Society of Phoenix have held panel discussions in the past year, including such subjects as "How To Have Patients Admitted To The Arizona State Hospital," "How To Admit Them To Private Hospitals," and "Outpatient Clinic Resources Available" looking toward the formation of the Adult Psychiatric Clinic in Phoenix. Numerous other meetings held, representing most all denominations and faiths, were recited. Counseling training programs are being established. Effort is being made to re-establish the Phoenix Chapter of the Academy of Religion and Mental Health.

Recommendations included plans to ask County Society Presidents to appoint a chairman representing a Committee on Medicine and Religion in order that statewide workshops might be scheduled and conducted by Bob Etheridge. It is planned to exhibit during the forthcoming annual meeting of the Arizona Medical Association displaying film strips and possibly showing the film entitled: "The One Who Heals". Brochures will be distributed. It is the hope that through these media those county society representatives in attendance may be stimulated to organize on the local level. Dr. Wagner concluded that what is needed is teamwork in the total patient care. This should include the patient's pastor, priest, or rabbi. A successful program in each community requires interested doctors. The members of this important committee should exert a favorable influence in their own communities in this important work.

Mental Health

INSTITUTE FOR ACHIEVEMENT OF HUMAN POTENTIAL OF ARIZONA

In response to an inquiry received from Jaime Vargas, M.D. (Tucson) who seeks this committee's opinion as to the Institute for the Achievement of Human Potential of Arizona, with headquarters in San Diego, California, represented by Mrs. Gayle L. Piper, Ed.M., Executive Director, Dr. Gregory stated that this Institute was incorporated in Arizona January 21, 1965, as a non-profit corporation. Among other things, its constitution states that "this corporation is formed to diagnose, recommend treatment and treat human brain injuries, neurological disorganization and resultant disabilities * * *". This represents the corporate practice of medicine, but there may become questions about organization of this corporation because there are no doctors of medicine known who are part of the Arizona chapter. The parent organization appears to have had its origin in Philadelphia and its Board of Directors includes very competent and able physicians. At that time its theory was the retraining of the injured brain through various problems in both children and adults. He further reviewed in detail the results of his investigation, progress to date, theories expounded, treatment pursued, and statistics accumulated and reported. Apparently AMA is awaiting more definitive information as to method of treatment and therapeutic results. Determined chairman will respond, letter first to be reviewed and approved by counsel.

MENTAL HEALTH CONFERENCE

Dr. Gregory stated that he intended to attend the 12th Annual Conference of State Mental Health Representatives, sponsored by the AMA Department on Mental Health, to be held at the Drake Hotel in Chicago March 18 and 19, 1966. Reimbursement of expenses would be appreciated.

PSYCHIATRY EDUCATION

Walter Wolman, Ph.D., Director of the AMA Department of Mental Health, urges establishment within each State and initiated by the State AGP a "State Committee for Continuing Education in Psychiatry". Such committee would plan and execute workshops, provide consultation and encouragement for the development of educational courses, help organize groups to attend the workshops, develop demonstration projects, and follow up with an evaluation of the workshops. Dr. Gregory reported that Dr. James L. Grobe (Phoenix) is chairman of the AGP Committee for Post Graduate Education in Psychiatry for general practitioners. The Arizona Psychiatric Society is in the process of forming a committee to act in liaison with the State AGP Committee. This region is having a meeting in Las Vegas on the 26th and 27th of February to which Dr. Gregory has been invited and will attend to review the experiences in the organization of these programs. For many years he has been coordinator of these programs in Arizona and at the present time, there are programs being activated in Safford and Flagstaff and one is to start shortly in Mesa. These are WICHE sponsored and the AAGP is organizing one for Prescott and Yuma. It would appear that in Arizona we are already well organized.

DR. DERALD G. MAY (P), OF PHOENIX, ENTERED THE MEETING AT THIS POINT.

MENTAL HEALTH LEGISLATION

Introduced by Dr. Gregory, Dr. May, Chairman of the Legislative Committee of the Arizona Psychiatric Society, referring to the Council on Mental Health and Council on Mental Retardation, each appointed by the Governor about two years ago, briefed the Committee on the work of the Councils during this period. The former body reported to the Governor in June of 1965, the latter in October of 1965. Therefrom evolved legislation to be introduced during this session of the Legislature (H.B. 183 to be introduced by the Committee on Public Health and Welfare) proposing the establishment of a State Board of Mental Health. It is reported that the Pima and Maricopa County Medical Societies

have formally endorsed the principles of a State Department of Mental Health and Mental Retardation, as have many other organizations including the Arizona State Hospital Board and the Arizona Psychiatric Society. Dr. May reviewed the various provisions of the proposed act and intended implications. While it was initially intended to consolidate in one department both Mental Health and Mental Retardation, there appears to be controversy and disagreement within the group representing mental retardation; therefore, MR has not been included in the proposed bill. Dr. Moore stated that while it is the hope that the day will come when all of the health services will come under a common Administrative Department of Health and Health Institutions, this appears not imminent; accordingly, it has accepted the recommendations of the Planning Committee which was to establish a Department of Mental Health and Mental Retardation. When the latter group backed away, they have felt compelled to support the proposed legislation, he said. In answer to the question, has the (ArMA) Legislative Committee reviewed this bill, Dr. May responded that it was handed to Dr. O'Hare (President) who indicated he would handle it.

DR. MAY LEFT THE MEETING AT THIS POINT.

Discussion ensued. Though the Committee has not had opportunity to review the content of the proposed bill as yet, it appears there has been considerable work done on the grassroots level in agitating for such legislation. It is unfortunate MH and MR can not be brought together and it is obvious there are differenees of opinion as to the separation of the mental health acivity from the Department of Health. It was determined, in the absence of the actual bill to bc introduced, that this Committee supports the principles as represented in the outline or preliminary draft of the proposed mental health legislation as presented here today.

CONSTRUCTION FACILITIES FOR MENTALLY RETARDED

Presented by the Division of Hospital and Medical Facilities of the Arizona State Department of Health, is the Arizona State Plan for construction of facilities for the mentally retarded. Plan for construction of facilities for the mentally retarded. Legislation will be required and it is proposed to introduce a bill in the current Arizona State Legislature. At the present time, the Arizona State Welfare Department is the agency that licenses mental retardation facilities. If the bill fails of passage, Arizona will not receive any mental retardation funds from the Federal Government next year.

Public Health

ORGANIZATION

The following members have accepted appointment to serve on the Public Health Subcommittee of the Professional Committee: William J. Moore, M.D. (Phoenix), Commissioner, Arizona State Department of Health, ex-officio member; W. Scott Chisholm, M.D. (Phoenix); Albert L. Rhoades, M.D. (Phoenix); Walter E. Ahrens, M.D. (Tucson), School Health; and Howard M. Kravetz, M.D. (Phoenix), Environmental Health, Water and Air Pollution. With the reorganization of the Public Health Subcommittee, two meetings have been held and with the addition of these new members who have displayed considerable enthusiasm, the future appears encouraging. It is assumed that Dr. Hermann S. Rhu (Tueson) in addition to his activities relating to Perinatal and Maternal Mortality, will likewise assume activity involving Maternal and Child Health. George A. Spikes, M.D. (Douglas) will assume the activity dealing with Rural and Migrant Health.

SECRETARIAL ASSISTANCE

The Executive Committee of the Board of Directors in meeting held September 18, 1965, gave serious consideration to the request of the Professional Committee that the Central Office furnish secretarial assistance to the Subcommittee on Public Health. It is eognizant of the fact that the Board of Directors on previous occasion limited secretarial serviees to standing committees in the light of budgetary limitations and minimal staff availability; likewise, it noted that to provide clerical services for one subcommittee would inevitably bring about equal recognition to other subcommittees oprating. It was the considered judgement of the Executive Committee that it is not now in position to implement staff personnel. Therefore, with regret it becomes necessary to deny the request of the Professional Committee.

PHYSICIANS AND SCHOOLS CONFERENCE

Dr. Walter E. Ahrens attended the 10th National Conference on Physicians and Schools held in Chicago September 23 through 25, 1965. He submitted a very detailed and comprehensive report thereon and Dr. Frissell thought that it should receive wide distribution. It was determined to suggest publication in ARIZONA MEDICINE and, if it can not be condensed, then possibly it could be serialized publishing portions in several issues.

VENEREAL DISEASE CONTROL

Unfortunately no one was in attendance at the Venereal Disease Control Symposium held in Chicago, November 20, 1965, associate with the AMA Health Education Campaign to combat VD and planned follow-up with Component County Medical Societies. To handle this problem, it is considered best to use available public health facilities through the Arizona State Public Health Department and organize educational programs for schools on the county levels. Effort is being made to develop educational material for the doctor with the hope that it may be published through the media of ARIZONA MEDICINE journal.

U OF A PESTICIDE STUDY

Frederick J. Brady, M.D., Director, Pima County Health Department, reports that the University of Arizona is the recipient of funds which will be used for the purpose of studies on the toxicity of pesticides toward humans. The objective of this study is to determine whether chronic effects do occur with manifestations which have been undetected in studies of lower animals or from studies on acute or sub-acute toxicity in man. The contract was awarded the U. of A. believing that from a long-range standpoint it could properly come under the medical school when it develops. The study is primarily an epidemiological study of a chronic toxication; a physician has been employed as director of

the study by the University in their section in entomology confined to agriculture, and a good physician medically oriented advisory board has been organized. The contract is under the U. S. Public Health Service. Discussion ensued regarding recent publicity referable to problems of pesticides and its relation to milk. Dr. Moore reported in regard to the situation here in Arizona which appears most favorable. The facilities of ARIZONA MEDICINE were offered should the Commissioner wish to communicate with the Association membership in this regard.

AIR POLLUTION

The Rocky Mountain Area Planning Conference on Chronic Respiratory Diseases, sponsored by the AMA Department of Environmental Health, was held in Tucson October 5 and 6, 1965. John L. Cogland, M.D. (Phoenix) was in attendance.

Sponsored by the AMA Council on Environmental and Public Health, Department of Environmental Health, Division of Socio-Economic Activities, is an Air Pollution Medical Research Conference to be held in Los Angeles March 2 through 4, 1966. Dr. Howard M. Kravetz (Phoenix) is agreeable to attending this important Conference and it is recommended that he be authorized to go at Committee expense.

FOOD HANDLERS CERTIFICATION

By action of the Arizona State Board of Health, October 15, 1965, it was advised that the State Board of Health will give due consideration to the suggested amendment to Rule No. 6 (to read: "No person can be employed to handle or prepare food until he is certified by a licensed physician and surgeon to be free from public health significance disease." when the rules and regulations of the State Department of Health, governing the control of communicable diseases, are next revised.

PKU TESTING OF NEWBORNS

Discussion ensued regarding proposed legislation H. B. 20 introduced in the Arizona State Legislature January 11, 1966, providing for a Phenylketonuria Test of Newborn Children. The committee determined to express disapproval of this measure.

MATERNITY CARE

It is reported that the American College of Obstetricians and Gynecologists has accepted responsibility for the planning and conduct of a National Study of Maternity Care. The objective is a comprehensive evaluation of all facets of maternity care in order to formulate future policies and programs. This project will fall within the scope of activity of Dr. Rhu in connection with the study on perinatal and maternal mortality.

VOLUNTARY HEALTH CONFERENCE

The 2nd National Voluntary Health Conference, sponsored by the American Medical Association, Council on Voluntary Health Agencies, is scheduled to be held in Chicago, February 16 and 17, 1966. The major objective of this national leadership conference is to provide substantial information to physicians and medical societies on the goals and programs of voluntary health agencies and their impact on health programs throughout the United States.

RURAL HEALTH CONFERENCE

The 19th National Conference on Rural Health, sponsored by the AMA Council on Rural Health, is scheduled to be held in Colorado Springs, March 17 through 19, 1966. Dr. George A. Spikes (Douglas) intends to attend this Conference and it is recommended that he be authorized to go at Committee expense.

HEALTH AND MEDICAL RECORD

Referred by the Medical Economics Committee to the Subcommittee on Public Health for review and possible recommendation of approval of a Unified Personal Health and Medical Record form submitted by M. J. Sharp, M.D., of Pocatello, Idaho, associate with the recording of examinations given to members of the Boy Scouts, Girl Scouts, church and other youth groups prior to participation in these organizational physical activities. The form has the endorsement of the Idaho State Medical Association and the Idaho Academy of General Practice and is being quite successfully used in that area for the purpose intended. It is suggested that similar use of this form would be of benefit to other States throughout the United States. It is anticipated a report will be received in this regard at the next meeting.

LEGISLATION

Considerable discussion ensued regarding proposed legislation dealing with (1) the Home Health Services Program, a part of Title 18; air pollution including automotive exhaust; and licensing of laboratories. It was noted that the Board of Directors will be considering legislation at its meeting scheduled to be held February 20th.

Safety

In the absence of the chairman, there will be no report on Safety. Dr. Wood is planning to attend the First Annual Arizona Safety Congress to be held in Phoenix February 24 and 25, 1966. Dr. Wood is a director of the Arizona Safety Council. The subjects listed under Safety will be reported upon at the next meeting.

Woman's Auxiliary

With the passing of Dr. Hamer, there is no report. Dr. Gregory was appointed and accepted assignment of this activity.

OTHER BUSINESS

Budget

Dr. Brooks stated that he has received a letter indicating that in accordance with the directive of the House of Delegates, copies of all annual reports, including committees, must be filed with the Secretary at least six weeks prior to the annual meeting. Such reports shall include, where applicable, a budgetary allotment recommendation for the year 1967, specifically itemizing any travel expenses anticipated. The Professional Committee budget in 1965 was $1200.00 of which $453.00 was expended. The 1966 budget is $1500.00. With the travel requests before this Committee including five individuals: Dr. Landeen for San Francisco, Dr. Gregory for Chicago, Dr. Baker for San Francisco, Dr. Kravetz for Los Angeles, and Dr. Spikes for Colorado Springs, this readily adds up to more than $1500.00. Obviously the Committee is underfinanced. At one time it was allotted $5000.00. It is the considered opinion if this Committee is to function and carry out its responsibilities, certain of these meetings should

be attended at its expense. It was determined that the Chairman should seek an additional allotment for 1966 approximating $1500.00 and for 1967, a budget between $3000.00 and $5000.00. Within the next two weeks, budgetary studies will commence. The Treasurer should be made cognizant of these requests. This will be done.

MEETING ADJOURNED AT 5:00 P. M.

Charles E. Henderson, M.D.
Secretary

BOARD OF DIRECTORS

Meeting of the Board of Directors of The Arizona Medical Association, Inc., held Sunday, February 20, 1966, in the Convention Center of the Safari Hotel, Scottsdale, Arizona, convened at 10:05 A. M., Arnold H. Dysterheft, M.D., Vice President and Chairman, presiding.

ROLL CALL

PRESENT:

Drs. Brazie, Walter; Brewer, W. Albert; Cloud, Jr., Daniel T.; Derickson, Philip G.; Dexter, Richard L.; Dierker, Hugh E.; Dudley, Jr., Arthur V., Treasurer; Dysterhaft, Arnold H., Vice President and Chairman; Finke, Howard W.; Flynn, Richard O.; Henderson, Charles E., Secretary; Jarrett, Paul B., President-Elect; McDaniel, W. Shaw.; Melick, Dermont W.; Moody, Deward G.; Price, Robert A.; Rhu, Jr., Hermann S.; Smith, Noel G.; Taylor, Ashton B.

COUNSEL:

Mr. Jacobson, Edward.

STAFF:

Messrs. Charpenter, Robert, Executive Secretary — ArMA; Robinson, Bruce E., Assistant Executive Secretary — ArMA; Boykin, Paul R., Executive Secretary — BOMEX.

GUESTS:

Drs. Bendheim, Otto L.; Breen, Hal J.; Craig, Carlos C.; Fife, Ray.

EXCUSED:

Drs. Beaton, Lindsay E., Delegate to AMA; Haley, III, Robert J., Northeastern District Director; Lorenzen, Robert F., Editor-in-Chief; O'Hare, James E., President; Steen, William B., Alternate Delegate to AMA.

MINUTES

Approved minutes of the meeting of the Board of Directors held December 12, 1965.

H. B. 183 MENTAL HEALTH

Hal J. Breen, M.D., President of the Arizona Psychiatric Society, appeared before this Board, on invitation, to urge support in the enactment of House Bill 183, introduced in the 27th Arizona State Legislature, Second Regular Session. The measure provides for the establishment of a State Board of Mental Health, a State Department of Mental Health, and the appointment of a Commissioner on Mental Health, Mental Retardation, initially proposed to be included in the bill, has been deleted on the insistence of that group.

Dr. Otto L. Bendheim likewise, on invitation, appeared before the Board, pointing out that the bill as submitted establishes an entirely independent autonomous organization. While he expressed favor in implementation of the proposed act, he strongly urged that it be a Division of the State Health Department.

Considerable discussion ensued. Question was raised as to why the Commissioner on Mental Health should not be a licensed doctor of medicine. It was stated that the present bill provides only that such Commissioner be eligible for licensure. It was determined that the Board would give further consideration to this measure later on during this meeting. The Chairman expressed appreciation and thanks to the guests for their time and informative information contributed to the discussion.

DRS. BENDHEIM AND BREEN LEFT THE MEETING AT THIS POINT.

MARICOPA COUNTY MEDICAL SOCIETY

Dr. Ray Fife, President, Maricopa County Medical Society, on invitation, appeared before the Board to discuss informally the relationships between the Society and this Association, especially as regards the position of its Board of Directors in recommending a "Carrier" other than Arizona Blue Shield Medical Service supported by this Association. The AETNA Life Insurance Company was recently announced the Carrier for Arizona, associate with the operation of that portion of Part B, Title 18, Public Law 89-97.

Lengthy discussion ensued culminating in the realization that there were differences of opinion and that they could be more effectively resolved with closer cooperation and interchange of viewpoints among and between the Society and Association which was pledged.

DOCTOR FIFE LEFT THE MEETING AT THIS POINT.

BOARD OF DIRECTORS

The President

Accepted with regret the resignation of James E. O'Hare, M.D., as President of this Association.

Delegate to AMA

Accepted with deep regret the resignation of Lindsay E. Beaton, M.D., as Delegate to the AMA representing this Association. The Secretary was directed to procure a suitable plaque expressing this Association's appreciation for his many years of honorable services, to be presented during its annual meeting.

Defeated a motion to appoint Dr. William B. Steen as Delegate to AMA to fill this vacancy for the remainder of the unexpired term because of conflict with the By-Laws. It is understood Dr. Steen will carry on as Alternate Delegate pending election of officers by the House of Delegates during the forthcoming annual meeting.

Editor-in-Chief

Accepted with regret the resignation of Robert F. Lorenzen, M.D., as Editor-in-Chief of this Association.

Appointed Roland F. Schoen, M.D. (Casa Grande), as Editor-in-Chief to fill this vacancy for the remainder of the term 1965-66.

ARMPAC BOARD OF DIRECTORS

Chairman

Accepted the resignation of William B. Steen, M.D., as Chairman of the ArMPAC Board of Directors.

Appointed John F. Kahle, M.D. (Flagstaff), currently a member of the ArMPAC Board of Directors, as its Chairman for the remainder of the term 1965-66.

Membership

Appointed Paul Hayes, D.D.S., 3308 North Third Avenue, Phoenix, on recommendation of the Arizona State Dental Association, a member of the ArMPAC Board of Directors, replacing Charles J. Mehlum, D.D.S., for the unexpired term 1965-66.

Richard O. Flynn, M.D. (Tempe), Mrs. Clare W. (Mary Anne) Johnson (Phoenix), and Sherman W. Thorpe, M.D. (Mesa), accept appointment to membership on the ArMPAC Board of Directors for the remainder of the term 1965-66.

Accepted the resignation of Charles W. McMoran, M.D., as member of the ArMPAC Board of Directors.

Appointed William W. McKinley, Jr., M.D. (Bisbee), a member of the ArMPAC Board of Directors for the unexpired term 1965-66.

* * *

P.L. 89-97 Medicare

Robert M. Ball, Commissioner of Social Security, Department of Health, Education and Welfare, acknowledges receipt of letter of this Board of Directors dated December 13, 1965, requesting the Secretary of HEW to favorably consider and designate Arizona Blue Shield Service as the CARRIER for the State of Arizona.

AMA advises that the carrier designated is the AETNA Life Insurance Company.

Approved the following resolution, prepared by counsel, to be introduced by this Board of Directors in the forthcoming annual meeting of the House of Delegates:

"WHEREAS, the House of Delegates of the Arizona Medical Association, Inc. on May 1, 1965 adopted Resolution 10 with respect to H.R. 6675 (which has since become Public Law #89-97 enacted by the 89th Congress on July 30, 1965, commonly referenced as 'Medicare') and,

"WHEREAS, after the passage of the said Resolution 10 but prior to putting such Resolution into effect or taking any action thereunder, the Arizona Medical Association, Inc. was advised that activation of the said Resolution might possibly be construed as placing the Arizona Medical Association, Inc. or its individual member physicians in jeopardy under the anti-trust laws of the United States by possibly causing individual non-participation individually arrived at to be misconstrued as group non-participation, and

"WHEREAS, this advice resulted in a resolution of the Board of Directors of the Arizona Medical Association, Inc., adopted September 19, 1965 which reads as follows:

'That the Board of Directors of the Arizona Medical Association, Inc., recommend to the House of Delegates that at its next meeting it rescind Resolution 10 and substitute in its place a resolution that will make it clear that Arizona Medical Association takes no stand whatever on the subject of 'Non-Participation' under Medicare, and which resolution will be designed to give the greatest possible freedom, consistent with safety to the Arizona Medical Association, for each individual doctor to decide for himself what his activities will and will not be with respect to the Medicare legislation and the attendant rules.'

and,

"WHEREAS, pursuant to the September 19, 1965 resolution of the Board of Directors of the Arizona Medical Association, Inc., and the recognition of the fact that it never was the intention of the Arizona Medical Association, Inc., or its House of Delegates to pass any resolution the activation of which might be construed to be a violation of any of the laws of the United States or to put the Association of any of its members in jeopardy.

"NOW, THEREFORE, BE IT RESOLVED, that the House of Delegates of the Arizona Medical Association, Inc. in its regular Session assembled in Scottsdale, Arizona this 30th day of April, 1966, specifically revokes in its entirety Resolution Number 10 adopted May 1, 1965, and

"BE IT FURTHER RESOLVED, that the Arizona Medical Association, Inc. takes no stand or position whatever on the subject of non-participation under the Medicare Act or any of its attendant rules, but, instead, leaves all decisions on this subject to each individual member physician as his conscience shall dictate, and

"BE IT FURTHER RESOLVED, that this Resolution be given the widest possible circulation among the membership of the Arizona Medical Association, Inc. so that each member shall be advised thereof."

Blue Cross-Blue Shield

Counsel, as directed, prepared and presented two forms of resolution embodying the proposed separation, administratively, of Arizona Blue Cross and Arizona Blue Shield.

By motion regularly made and carried, the Board of Directors determined to oppose the introduction of such resolution at the annual meeting of this Association. Dr. Melick is recorded as voting "NO."

Arizona Atomic Energy Commission

Reported that John P. Heileman, M.D. (Phoenix), Schuyler V. Hilts, M.D. (Tucson), and Robert H. Thoeny, M.D. (Phoenix), previously nominated by this Board, were recognized and appointed by the Arizona Atomic Energy Commission as members of its Medical Advisory Committee.

Board of Medical Examiners

Herman S. Rhu, Jr., M.D. (Tucson), was reported appointed by the Governor a member of the Board of Medical Examiners of the State of Arizona for the term expiring June 30, 1966.

Nominated Richard L. Dexter, M.D., Juan E. Fonseca, M.D., and Dennis Bernstein, M.D., all of Tucson as required by statute, subject to their respective approval, to be proposed to the Governor for membership on the Board of Medical Examiners of the State of Arizona for a term of five years to fill an anticipated vacancy July 1, 1966.

BENEVOLENT AND LOAN FUND COMMITTEE

VNB No. 170-04714

Received with grateful appreciation, the following memorials deposited in the VNB Trust Account No.

170-04714, Medical Student Loan Program:

Jesse D. Hamer, M.D., memorial: Dr. and Mrs. Ben P. Frissell ($12.50); Dr. and Mrs. George G. McKhann ($25.00); and Phoenix Clinical Club ($25.00).

Henry L. Franklin, M.D., memorial: Dr. and Mrs. Ben P. Frissell ($12.50); and Phoenix Clinical Club ($25.00).

VNB Trusts Nos. 120-03068 and 170-04714

Dr. Cloud, Chairman, Benevolent and Loan Fund Committee, discussed in detail the recommendations of his committee dealing with the refinancing of medical student loans initiated under the first VNB Trust No. 120-03068 transferring the past due accounts to the current VNB Trust No. 170-04714 account. This has the approval of the banking institution. Involved is the need for adjustment of the Loan Limitation (currently 65% of the Budget) effected by this Board.

It was regularly moved and unanimously carried that the loan limitation be now placed by the Board to be equal to the amount of 65% of the annual budget, plus an amount as determined by current accounting sufficient to cover the transfer of loans from the old Trust to the new Trust.

Military Service — Active Practice

Approved of the recommendation of the Benevolent and Loan Fund Committee that, within legal requirements and those stipulated in agreements executed between this Association and the Valley National Bank as Trustee, medical student loan borrowers pay interest on such loans while in military service and make some attempt to pay part of the principal, such military service being considered "active practice," to consummate, as rapidly as possible, repayment of these loans, making such capital funds available to other students seeking similar assistance.

CENTRAL OFFICE ADVISORY COMMITTEE

Membership Classifications

GRAHAM — Joseph W. Milliron, M.D. (Safford) — Active, granted Service (one-quarter dues), account appointment as County Physician, effective February 1, 1966.

MARICOPA — Harold Shapiro, M.D. (Phoenix) — Active, granted Active (dues exempt), account 70 years of age, effective January 1, 1967.

Stanley W. Holton, M.D. (Phoenix) — Active, granted Associate (dues exempt), account illness, effective January 1, 1966.

MARICOPA — Ted James Stuart, Jr., M.D. (Phoenix) — Active, granted Associate (dues exempt), account military service, effective January 1, 1966.

Leslie B. Smith, M.D. (Phoenix) — Active, granted Associate (dues exempt), account illness, effective January 1, 1966.

PIMA — Vernon L. Mahoney, M.D. (Tucson) — Active (dues exempt account age 70), granted Associate (dues exempt), account total disability, effective January 1, 1966.

Seymour Leonard Rosenbaum, M.D. (Tucson) — Active to Associate (dues exempt), account illness, effective January 1, 1966. Action deferred.

Alphonse J. Wagner, M.D. (Tucson) — Active, granted Associate (dues exempt), account illness, effective January 1, 1966.

Edward S. Gelardin, M.D. (Tucson) — Service, granted Associate (dues exempt), account military service, effective January 1, 1966.

Financial Report

Dr. Dudley advised that the auditors, Henry and Horne (Phoenix), had completed the audit of accounts of this Association for the year 1965. Receipts totalled $187,982.39; expenditures $166,286.92, reflecting total revenues in excess of expenditures of $21,695.47.

Dr. Melick reported that the House of Delegates of the American Medical Association when it meets in Chicago in June will take final action on a recommendation of the Board of Trustees to increase annual AMA membership dues by $25.00, from $45.00 to $70.00, effective January 1, 1967.

The Treasurer reviewed the financial report covering the first month of January, 1966, reflecting total "Revenues" received amounting to $65,683.51 (of a total budget of $196,160.00) and "Expenditures" of $9,622.42 (of a total budget of $190,864.00). ACCEPTED.

It was regularly moved and unanimously carried that the dues structure remain unchanged for another year ($105.00).

LEGISLATIVE COMMITTEE

Reviewed were the following bills introduced in the 27th Arizona State Legislature, Second Regular Session, action taken in each instance noted:

SB 16 — AN ACT relating to Air Pollution, directing the State Board of Health to develop and publish standards for quality of air. SUPPORT IN PRINCIPLE WITHOUT EVALUATING STANDARDS.

SB 50 — AN ACT relating to Education, eliminating the requirement of returning to Arizona to practice under the Western Regional Cooperation in Higher Education Compact. DISAPPROVED.

SB 86 — AN ACT relating to Public Health — Tuberculosis Control. APPROVED.

SB 104 — AN ACT relating to Public Health, defining "Hospital" and prescribing exceptions to certain laws regulating hospitals. ENDORSED.

SB 105 — AN ACT relating to Education, providing for the certification of School Nurses. NO ACTION.

SB 138 — Establishes State Board of Mental Health (same as HB 183). APPROVED IN PRINCIPLE.

SB 140 — AN ACT relating to Medicine and Surgery, providing for non-liability of the Physician and Surgeon and any other person when rendering Emergency Aid. APPROVED.

SB 143 — AN ACT relating to Public Health and Safety, providing for registration and regulation of the business of manufacturing and selling at wholesale and retail and the repairing, renovating, sterilizing and fumigating of Bedding and Upholstered Furniture. APPROVED.

SB 155 — AN ACT relating to Insurance, providing that benefits for certain medical or surgical services performed by licensed Podiatrists shall not be excluded from Hospital and Medical Service Corporation contracts, Disability Insurance contracts and Group Disability Insurance contracts. OPPOSED.

SB 156 — AN ACT relating to Insurance and to Hospital and Medical Service Corporations, providing for payments to nursing care homes, pathological laboratories and subscribers. NO ACTION — REFERRED TO LEGISLATIVE COMMITTEE.

SB 163 — AN ACT relating to Insurance, providing practices for Hospital Service Corporations and Medical Service Corporations. OPPOSED.

SB 177 — AN ACT relating to Public Health and Safety, authorizing the State Department of Health and County Departments of Health to render Home Health Services and charge and accept fees therefor; also providing for confidentiality of records.

WILLIAM J. MOORE, M.D., COMMISSIONER, ARIZONA STATE DEPARTMENT OF HEALTH, ENTERED THE MEETING AT THIS POINT.

Dr. Moore briefly reviewed the intent and purpose of SB 177. The measure was introduced for the Arizona State Department of Health. It relates to Home Health Services in Mederal Medical Care. It is considered "must" legislation; otherwise, you run the risk of losing home care health services. FAVORED PASSAGE.

SB 184 — AN ACT relating to Occupational Diseases and Disability. NO ACTION.

* * *

HB 3 — AN ACT relating to State Lands, authorizing the Governor to execute quitclaim deeds for certain State Hospital land. APPROVED.

HB 20 — AN ACT relating to Public Health, providing for a Phenylketonuria Test of Newborn Children. OPPOSED.

HB 26 — AN ACT relating to Medicine and Surgery, providing for non-liability of Physician and Surgeon, and other person when rendering Emergency Aid. APPROVED.

HB 29 — AN ACT relating to Taxation, providing for the exemption of Prescription Medicine from the Transaction Privilege Taxes and the Use Tax. AFFIRMED.

HB 38 — AN ACT relating to State Lands, authorizing the Governor to execute a quitclaim deed for certain State Hospital Land. APPROVED.

HB 40 — AN ACT relating to Education, providing for the certification of School Nurses. NO ACTION.

HB 45 — AN ACT relating to Phenylketonuria Test for Newborn Child. OPPOSED.

HB 51 — AN ACT relating to Trade and Commerce, regulating the manufacturing, repairing, renovating, selling and leasing of Bedding. APPROVED.

HB 64 — AN ACT relating to Public Health and Safety, providing for use of injunctive process for violation of Air Pollution regulations, and providing for the establishment of an Air Pollution Hearing Board. NO ACTION — REFERRED TO LEGISLATIVE COMMITTEE.

HB 65 — AN ACT relating to Children, providing for minimum standards for Child Care Agencies, authorizing the Department of Public Health to issue licenses, adopt regulations and inspect premises of Child Care Agencies. SUPPORTED.

HB 68 — AN ACT relating to the licensing and regulation of Marriage, Family and Child Counselors. AGAINST ENDORSEMENT.

HB 89 — AN ACT relating to Taxation, exempting Food Products, Medicine, and Water from the Transaction Privilege Tax. NO ACTION.

HB 132 — AN ACT relating to Vital Statistics. It would appear this measure constitutes practically a complete and extensive rewrite of the existing statute. It is very probable it will not be enacted this year. Additional study seems indicated. NO ACTION — REFERRED TO LEGISLATIVE COMMITTEE.

HB 146 — AN ACT relating to Education, eliminating the requirements for practice in Arizona and repayment of funds by students. NOT SUPPORTED.

HB 166 — AN ACT relating to Insurance, providing that subscriber shall have freedom of choice in selecting practitioner under certain insurance policies. DISAPPROVED.

HB 176 — AN ACT relating to Labor, providing that employees injured in industrial accidents may select their own physicians when accident benefits are provided by employers. NO ACTION — REFERRED TO LEGISLATIVE COMMITTEE.

HB 183 — AN ACT relating to Public Health and Safety, providing for the establishment of a State Board of Mental Health, establishing a State Department of Mental Health, and providing for the appointment of a Commissioner of Mental Health. This measure was reviewed in depth during the morning session. There is justifiable question as to why mental health should not fall within the scope of activities of the Arizona State Department of Health. Dr. Moore reviewed a number of provisions in the measure which would appear to require clarification. The bill is being held in committee pending receipt of recommendations to be submitted by the Commissioner. APPROVED IN PRINCIPLE.

DR. MOORE LEFT THE MEETING AT THIS POINT.

HB 190 — AN ACT relating to Public Health and Safety, providing for the licensing of Clinical Laboratories and Medical Technologists. NO ACTION — REFERRED TO LEGISLATIVE COMMITTEE.

HB 201 — AN ACT relating to Occupational Diseases and Disability. NO ACTION — REFERRED TO LEGISLATIVE COMMITTEE.

HB 219 — AN ACT relating to Occupational Diseases and Disability. NO ACTION — REFERRED TO LEGISLATIVE COMMITTEE.

Counsel questioned whether this is the most practical approach in reviewing legislation dealing with health and welfare. He agreed to submit recommendations early in the new year as to processing of bills.

Kerr-Mills Activation

Dr. Brewer reported that the State Medical Advisory Committee to the Kerr-Mills Law has formally met and recommended to the State Legislature that this Law not be activated because of the possible economic impact of Title 19 of the Federal Medicare Law on the State of Arizona. The Legislature is drafting a bill which it is the hope will satisfactorily meet the situation.

Chairman

Approved appointment of Carlos C. Craig, M.D. (Phoenix), as Chairman of the Legislative Committee of this Association to fill the vacancy for the remainder of the term 1965-66. Dr. Craig has accepted the assignment.

MEDICAL ECONOMICS COMMITTEE

ODMC Contract

Authorized execution of ODMC Contract No. DA-05-114-66-MD-87 for the term March 1, 1966, ending February 28, 1967.

Insurance Claim Form

Adopted the simplified and standardized health insurance claim form approved by the Health Insurance Council, approved by the Council on Medical Service of the American Medical Association, authorizing printing of the form in quantity, as an approved Association form, made available for purchase at cost to the members of this Association, and that adequate publicity among the membership be given as to its availability.

PROFESSIONAL COMMITTEE

Mental Health

Received the recommendation of the Professional Committee supporting in principle HB 183 relating to Mental Health.

PKU Test

Received the recommendation of the Professional Committee opposing enactment of HB 20 Phenylketonuria Test of Newborn Children, and recording the mail vote of the membership of this Board, twenty (20) opposing, four (4) not voting.

School Nurses

Received the recommendation of the Arizona State Nurses' Association urging the support of this Association of HB 40 and SB 105, certification of School Nurses.

Heart Diseases — Cancer — Stroke

Received a communication from Merlin K. DuVal, Jr., M.D., Dean, University of Arizona College of Medicine, expressing his concern regarding the establishment of "Regional Medical Complexes," as provided in Public Law 89-239 Heart Disease — Cancer — Stroke. It was pointed out there already exists a Subcommittee on Federal Services of the Professional Committee engaged in the study of this measure and other Federal Statutes. It was directed that the matter be referred to the Chairman, Dr. William B. Steen, urging study of this law and communication with the Dean, Dr. DuVal. It is further requested that the committee report to this Board in due course.

PUBLIC RELATIONS COMMITTEE

Community Service Award

Nominated Kenneth Charles Baker, M.D. (Tucson), to receive the A. H. Robins Company — Community Service Award for 1966.

ARIZONA TERRITORIAL MEDICINE PUBLICATION

Affirmed the execution by this Association of contract, approved by counsel, entered into with the Arizona Historical Foundation, Bert M. Fireman, Executive Vice President, for the publication of a book entitled: "Medicine In Territorial Arizona" by Frances Quebbeman. Dr. Brewer reported that the publication will be off the press in time for the annual meeting. It is planned each member will receive a free copy and there continues marked enthusiasm as to its content.

Authorized the insertion of the member's name on the cover of the volumes to be distributed to the membership.

Authorized procurement of three plaques to be presented to Frances Quebbeman — author, Jack Carroll, Ph.D. — director, and Bert M. Fireman, publisher, expressing the appreciation of this Association for the individual effort contributed by each in the realization of this book, and that they be presented on the occasion of the President's Dinner during the forthcoming annual meeting.

COMMUNICATIONS

Received from F. J. L. Blasingame, M.D., Executive Vice President, American Medical Association, actions of the AMA House of Delegates taken in Philadelphia, November 28 through December 1, 1965.

Received letter of appreciation expressed by F. J. L. Blasingame, M.D., Executive Vice President, American Medical Association, for the reception, beneficial experience and grateful opportunity afforded him during his visitation with the Board of Directors in meeting held December 12, 1965.

Received from Paul R. Boykin, Executive Secretary, Board of Medical Examiners of the State of Arizona, letter of appreciation and thanks for the Christmas remembrance and increased insurance benefits extended to him by this Association.

OTHER BUSINESS

Authorized distribution bilaterally of the minutes of all meetings of this Board of Directors to the component County Medical Societies.

Authorized distribution of all minutes of Committee meetings to the component County Medical Societies.

These actions were taken in an endeavor to improve communication between the state Association and its component County Medical Societies.

MEETING ADJOURNED AT 5:15 P.M.

Charles E. Henderson, M.D.
Secretary



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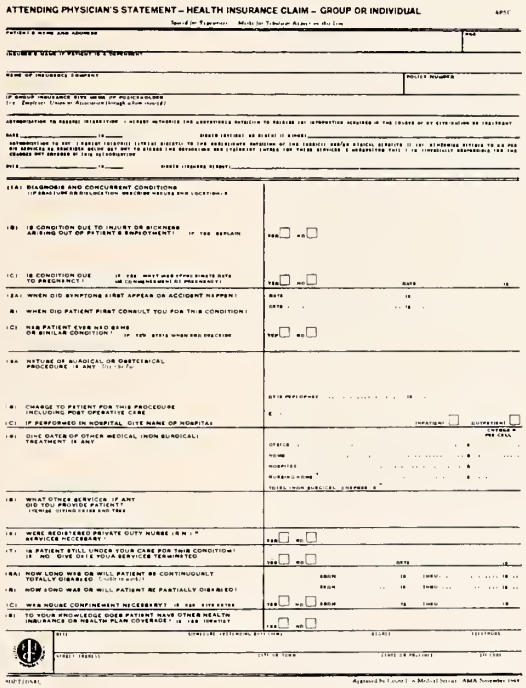
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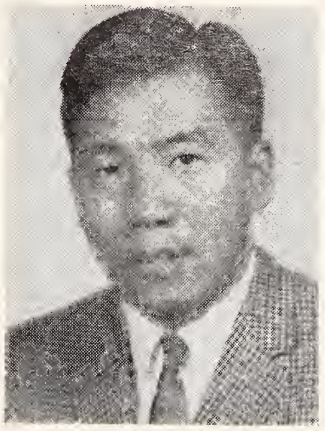
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Diagnosis of Chronic Pancreatic Disease



David C. H. Sun, M.D.

The need for a profile of pancreatic tests in cases of obscure abdominal symptoms is documented in this worthwhile article.

THE diagnosis of acute pancreatitis has, in the past, rested largely upon the demonstrations of an abnormal elevation in serum amaylase and/or lipase; however, the detection of chronic pan-pancreatic calcification and diabetes, mellitus, or the early detection of pancreatic carcinoma, has been less successful. Moreover, the clinical findings of chronic pancreatitis or pancreatic neoplasm may also be so mild or atypical that the diagnosis is not suspected, and the diagnostic studies are not requested.

In many chronic affections of the pancreas, symptoms do not arise until the disease is far advanced. Though the symptom-complex of unexplained abdominal pain with radiation to the costal regions and back might direct attention to the disease of the pancreas, in the absence of serum enzyme elevation and positive findings on roentgen examination, a definitive diagnosis of chronic pancreatitis, short of operation, is possible only by specific laboratory tests. We are certain that chronic pancreatitis is a disease more prevalent than is now suspected and is especially overlooked, or rather, misdiagnosed in its less severe forms. The development of a clinically feasible simple test, or tests, for impaired pancreatic function is needed.

A variety of laboratory procedures have been advocated in the past to obtain information of aid in the diagnosis of pancreatic disease. Many of the earlier tests have been discarded. The value of the serial serum amylase and lipase determinations in pancreatic disease is well recognized. However, clinical experience has shown that elevated blood values for these enzymes are not necessarily pathognomonic of intrinsic pancreatic disease. In addition, the fact that the serum amylase and lipase may not be elevated in transitory forms of acute pancreatitis and in severe pancreatic damage may not be as well known.

This paper describes our experience with the use of the following pancreatic function tests—pancreozymin-secretin test, starch tolerance test, and fecal fat excretion test—in 78 patients with

From the Gastrointestinal Research Laboratory, Veterans Administration Hospital, and The Arizona State University, Tempe, Arizona

chronic pancreatitis. In addition, data is presented to indicate the value of a battery of simplified diagnostic tests for the early detection of chronic pancreatic disease.

MATERIAL AND METHODS

Seventy-eight patients with chronic pancreatitis were studied. The diagnosis was based upon one of the following criteria: repeated bouts of abdominal pain accompanied by significant elevation of serum amylase and/or lipase during each attack; a minimum of two well documented episodes of acute pancreatitis; clinical symptoms in recurring fashion accompanied by steatorrhea and azotorrhea on a controlled diet, demonstration of pancreatic calcification on roentgen study, and/or chronic pancreatitis found at operation or post-mortem examination, even in the absence of elevated serum enzyme values.

Pancreozymin-Secretin Test:

The pancreozymin-secretin test was done in 78 patients with chronic pancreatitis. Details of the technique have been described previously (1-3). Ninety units of pancreozymin were administered intravenously, followed in 10 minutes by 80 units of secretin. The duodenal contents were collected for a basal 20-minute specimen, a 10-minute specimen after pancreozymin, and 10-, 10-, 20-, and 20-minute specimens after secretin. The volume of the duodenal contents recovered was measured, pH determined with a Beckman pH meter, bicarbonate concentration by titration, and amylase by Somogyi's method (4). Blood specimens were taken prior to pancreozymin injection and at 1-, 2-, and 4-hour intervals after secretin stimulation for serum amylase and lipase determinations (5,6).

The statistically derived norms for this test are (2):

Serum amylase	$<$ 214 units/100 ml
Serum lipase	$<$ 0.35 ml N/10 NaOH
Volume, post-secretin (60 min)	$>$ 1.6 ml and $<$ 4.9 ml/kg body weight
Maximum bicarbonate concentration	$>$ 70 mEq/L
Total amylase output (70 min)	$>$ 93,280 units

A unit of amylase activity is defined in this paper as one mg of glucose equivalent.

Starch Tolerance Test:

The starch tolerance test was done in 58 patients with chronic pancreatitis. This test was carried out as devised by Althausen and Uyeyema (7), except for a change in the volume of the starch meal (8). On one day, the usual 3-hour, 100 gm glucose tolerance test was performed; on another day, 100 gm of soluble starch were administered. This soluble starch, prepared according to Lintner (Merck, Sharp and Dohme), was freshly suspended in 150 ml of water, then poured into 200 ml of water which had just ceased boiling, and stirred rapidly and thoroughly. The patient was urged to ingest the meal rapidly. The possible pitfalls of the test have been discussed (8).

Radioactive and Chemical Fecal Fat Determination:

The fecal fat excretion was studied in 58 patients. They ingested at least 50 gms of fat per day during the period of stool collection. Fifty to one hundred μc of I^{131}-labeled glycerol triolate in capsule form were administered orally to the fasting subject. All stools passed during the following 72 hours were collected in Sealright-Alservis No. 32 plastic-lined paper cartons and weighed to the nearest 0.1 gm. The stool was then homogenized for 2 minutes with a measured amount of water in a stainless steel Waring Blendor of 2-gallon capacity. Portions of the homogenate were transferred to appropriate tubes for radoactivity measurements in a well type scintillation detector. A measured fraction of administered I^{131}-triolein was counted at the same time. Radioactivity was expressed as per cent of administered dose per 72-hour stool specimen. The fecal fatty acid contents were determined on similar aliquots of the homogenized stool according to the method of van de Kamer (9).

A Battery of Simplified Diagnostic Tests:

In the group of 78 patients with chronic pancreatitis who had the pancreozymin-secretin test, 66 had, in addition, the starch tolerance test and/or fecal fat determination. The interrelationship and the sensitivities of each of the pancreatic function tests will be evaluated.

TABLE I: DATA ON DUODENAL CONTENTS IN 78 PATIENTS WITH CHRONIC PANCREATITIS

Group (Number of cases)	Volume, Post-Secretin ml./kg.	Maximal Bicarbonate Concentration mEq./L	Total Amylase Output (70 min.) Units
Total Group (78)			
Mean ± S. D.	2.62 ± 1.91	67.3 ± 26.2	103,627 ± 109,144
Observed range	0.60 — 9.60	14.0 — 119.0	44 — 568.660
Percentage in abnormal range	49	48	62
Elevated Fasting Serum Enzyme Values (9)			
Mean ± S. D.	2.26 ± 1.87	57.3 ± 27.5	91,104 ± 86,384
Observed range	0.60 — 6.80	14.0 — 103.0	4,196 — 289,000
Percentage in abnormal range	56	67	67
Positive Serum Enzyme Response (22)			
Mean ± S. D.	2.82 ± 1.84	82.0 ± 16.9	163,802 ± 123,767
Observed range	0.70 — 7.70	50.0 — 110.0	23,629 — 568,660
Percentage in abnormal range	36	18	32
Negative Serum Enzyme Response (47)			
Mean ± S. D.	2.60 ± 1.97	62.2 ± 27.2	67,987 ± 77,593
Observed range	0.60 — 9.60	22.0 — 119.0	44 — 470,133
Percentage in abnormal range	53	57	78

RESULTS

Pancreozymin-Secretin Tests:

Of the 78 patients with chronic pancreatitis, 64 were male and 14 were female. The ages ranged from 25 to 69 years. Thirteen patients had calcification of the pancreas. A serum enzyme response to prancreozymin-secretin stimulation is considered positive when serum values of amylase or lipase, after stimulation, rise above the upper limits of normal. This, for serum amylase, is 214 units per 100 ml, and for serum lipase, 0.35 ml N/10 NaOH.

The fasting serum enzyme values on the day of the pancreozymin-secretin test were normal in 69 patients and elevated in 9 patients. In the former group, a positive serum enzyme response to pancreozymin-secretin stimulation was observed in 22 patients (32%). A significant elevation of serum amylase was seen in 7, of serum lipase in 9, and of both enzymes in 6 patients. Eleven of these 22 patients had a normal finding of the duodenal contents.

Data on duodenal contents after pancreozymin-secretin stimulation in 78 patients with chronic pancreatitis are presented in Table I. Abnormal values for volume were observed in 38 patients (49%), for maximum bicarbonate concentration in 37 (48%), and for total amylase output in 48 (62%). An abnormal value in one or all of these measurements was found in 63 (81%) of the 78 patients with chronic pancreatitis. The combined study of serum enzyme response and the duodenal contents after pancreozymin-secretin stimulation increased the incidence of abnormal results to 95% (74 cases).

A significant trend was observed when the data on duodenal contents were analyzed with respect to the serum enzyme response. Among the 78 patients with chronic pancreatitis, three groups were formed; Group 1 consisted of 9 patients with elevated fasting serum enzyme value on the day of the test; Group 2, of 22 patients with positive serum enzyme response; and Group 3, of 47 patients with negative serum enzyme

response. The ranges and means of volume data did not differ significantly among these three groups. However, the ranges and means of the maximum bicarbonate concentration and amylase output data were lower in patients with negative serum enzyme response than in patients with positive serum enzyme response. The difference between these means is significant at the one per cent level (Table I). From the physiological standpoint, these results suggest that patients with positive serum response are in the early stage of chronic pancreatic disease, and that patients with negative serum enzyme response are in a severe stage of the disease.

Starch Tolerance Test:

The normal value for the starch tolerance test in our laboratory has been previously reported: the range varied from -39 per cent to +83 per cent, and the upper limit of normal was +100 percent. Of the 58 patients with chronic pancreatitis who had the starch tolerance test, clinical diabetes was found in 17, pancreatic calcinosis in 10, and gross steatorrhea in 21. An abnormal glucose tolerance curve with the blood sugar value greater than 140 mg per 100 ml in the 2-hour specimen was observed in 39 cases. The starch tolerance test was within the normal range in 41 patients and yielded positive results in the other 17 (29%).

Radioactive Fecal Fat Study:

The normal values for I^{131}-triolein fecal excretion test in our laboratory are 6 per cent of administered dose for a 72-hour stool specimen. The I^{131}-triolein test was done in 58 patients with chronic pancreatitis; 17 had a history of gross steatorrhea. An abnormal fecal radioactivity was found in 29 cases (50%).

Correlation of Provocative Serum Enzyme Response and Other Diagnostic Tests:

Table 2 shows the incidence of abnormal glucose tolerance test, starch tolerance test, and I^{131}-fecal excretion test, among various types of serum enzyme response to pancreotzymin-secretin test in 66 patients with chronic pancreatitis. An abnormal glucose tolerance curve was observed in 29% of patients with positive serum enzyme response, in 81% of patients with negative serum enzyme response, and in 89% of patients with calcification of the pancreas. Similarly, an increase in the incidence of abnormal I^{131}-fecal excretion was observed in these three groups, 33%, 52%, and 67%, respectively. These results again suggest that patients with positive serum enzyme response are in the early stage of chronic pancreatic affection. The results of the starch tolerance test among these groups are difficult to explain. An abnormal starch tolerance test was observed in 24% of patients with positive serum enzyme response, in 38% of patients with negative serum enzyme response, and in 11% of patients with calcifications of the pancreas. In addition, there was an absence of correlation between the results of the starch tolerance test and the amylase output of the duodenal contents after pancreozymin-secretin stimulation.

DISCUSSION

The value of the glucose tolerance test in the diagnosis of pancreatic disease is well recognized. Glycosuria and hyperglycemia may accompany pancreatic disease, either as transient phenomena following an acute inflammation or as constant accompaniments of destructive disease of the parenchyma. Normally, the endocrine function of the pancreas is not affected by disease until extensive damage to the gland has occurred, at which time an abnormal response to glucose tolerance test may be found. Our findings of the high incidence of abnormal glucose tolerance test in two groups of patients with chronic pancreatitis, manifesting a negative provocative serum enzyme test (81%), and calcification of the pancreas (89%), as opposed to the low incidence in patients with positive serum enzyme test (29%), support this concept. This inverse relationship between the results of glucose tolerance test and the provocative serum enzyme test has similarly been noted by Burton et al (10) and Tierney et al (11).

The findings of an abnormal glucose tolerance test may lead one to suspect the possibility of pancreatic disease. However, no diagnosis of pancreatic disease can be based solely on an abnormal glucose tolerance test. It is a nonspecific laboratory test for pancreatic disease. A precise definition of normal values is difficult, and abnormal values may result from dietary and hepatic factors. The antecedent diabetes or the patient's age may account for the high incidence of abnormal glucose tolerance test in patients with cancer of the pancreas. Other diagnostic

TABLE 2. CORRELATION OF PROVOCATIVE SERUM ENZYME TEST, STARCH AND GLUCOSE TOLERANCE TESTS, AND I-131 — TRIOLEIN TEST IN 66 PATIENTS WITH CHRONIC PANCREATITIS.

Provocative Serum Enzyme Test to Pancreozymin-Secretin	Glucose Tolerance Test		Starch Tolerance Test		I^{131}-Triolein Test	
	Number Abnormal	Per Cent Abnormal	Number Abnormal	Per Cent Abnormal	Number Abnormal	Per Cent Abnormal
Positive Serum Enzyme Response	5/17	29	4/17	24	5/15	33
Negative Serum Enzyme Response	26/32	81	12/32	38	16/31	52
Calcification of the Pancreas	8/9	89	1/9	11	8/12	67

studies should be done in order to establish the presence of pancreatic disease.

The starch tolerance test is based upon the assumption that pancreatic amylase constitutes the major physiologic substance responsible for hydrolyzing starch in significant amounts (7,8). However, there was an absence of correlation between the results of the starch tolerance test and the amylase output of the duodenal contents after pancreozymin-secretin stimulation. One possible explanation is that the salivary ptyalin may play a role in the digestion of starch in patients who have an absence of free hydrochloric acid in the stomach. Thus, a negative starch tolerance test does not rule out pancreatic disease. This, however, does not detract from the value of starch tolerance test, inasmuch as we have observed only one false positive result in 250 patients without pancreatic disease. If the starch tolerance test is positive, it must be considered as a reliable indicator of pancreatic disease (8).

Our results on the use of I^{131}-labeled triolein and I^{131}-labeled oleic acid are similar to those reported previously (12-14). I^{131}-labeled triolein fecal excretion test may give both false negative in patients with steatorrhea and false positive in those without steatorrhea, when compared with the fecal fatty acid determination on the same stool specimen, thus confirming the work of Pimparkar et al (13) and Rufin et al (14). However, I^{131}-labeled triolein and fecal fatty acid determinations measure impaired digestion as well as impaired absorption of the fat by the gastrointestinal tract. They are thus non-specific tests for detecting disease of the pancreas.

It has been suggested that the use of both I^{131}-labeled triolein and I^{131}-labeled oleic acid might be used in the differentiation of pancreatic insufficiency from intestinal malabsorption, the former yielding abnormal values with the triolein but not with the oleic acid, while the latter would produce abnormal results with both. Our experience shows that this does not apply in all cases of chronic pancreatitis with steatorrhea. We had four cases of chronic pancreatitis with high fecal excretion of both I^{131}-triolein and oleic acid; however, the findings on small intestinal mucosal biopsy and D-xylose tolerance test was normal. In fact, the D-xylose tolerance test was normal in all 23 patients with chronic pancreatitis.

The value of the pancreozymin-secretin test in the diagnosis of chronic pancreatic disease has been well documented. The simple provocative blood enzyme test following pancreozymin-secretin stimulation is useful in a diagnositic survey for chronic pancreatic disease. A positive serum enzyme response was found in 22 (32%) of 69 patients with chronic pancreatitis whose fasting serum enzyme values were within normal range. We have found that a positive provocative test is seen more frequently when the duodenal output is adequate than when it is diminished; a similar observation was made by Burton et al (15).

An abnormal value for volume, maximal bicarbonate concentration, and/or amylase output was found in 63 (81%) of the 78 patients with chronic pancreatitis. A lowering of the amylase output was the most common finding in this

group. This is in contrast to a lowering of maximal bicarbonate concentration as the most common finding when secretin was used as a stimulant. The mean maximal bicarbonate concentration and amylase output were lower in patients with negative provocative serum enzyme response and in patients with calcification of the pancreas, than in those with a positive serum enzyme response, indicating a severe state of pancreatitis in the former two groups.

Each of the above-mentioned tests measures essentially a different facet of altered pancreatic function. The value of a profile of pancreatic function test for the early diagnosis of pancreatic disease has already been presented (16,17). A combination of provocative serum enzyme response to pancreozymin-secretin stimulation, starch tolerance test and I^{131}-triolein fecal excretion test yielded positive results in one or all of these three tests in 86 per cent of 43 patients with chronic pancreatitis. For patients in whom the final diagnosis is in any way equivocal after the three tests have been done, we recommend repetition of the pancreozymin-secretin test with, in addition, collection of duodenal contents for examination.

None of the tests herein discussed will differentiate this disease from carcinoma of the pancreas or from periampullary carcinoma of the duodenum, since these diseases can produce a response similar to that which may be observed in chronic relapsing pancreatitis, except for the cytological study of the duodenal content after pancreozymin-secretin stimulation.

SUMMARY AND CONCLUSIONS

Chronic relapsing pancreatitis is a disease far more prevalent than is now suspected and is especially overlooked or misdiagnosed in its lesser severe form. Thus, many cases may go unrecognized or may be diagnosed as functional. Chronic pancreatitis often masquerades as psychosomatic gastro-intestinal disease, drug addition, or spastic colitis, while pancreatic carcinoma is usually beyond surgical cure when diagnosed. The development of clinically feasible simple tests for impaired pancreatic function is needed.

The value of glucose and starch tolerance tests, radioactive and fecal fat measurements, and pancreozymin-secretin tests for the early detection of pancreatic disease is discussed. The glucose tolerance test is a non-specific test for exocrine pancreatic function. The starch tolerance test yielded abnormal results in 29 per cent of 58 cases with chronic pancreatitis. I^{131}-labeled triolein fecal excretion test yielded abnormal results in 50 per cent of 58 cases; however, it measures impaired digestion as well as impaired absorption of the fat by the gantrointestinal tract. The combined study of serum enzyme response and duodenal content after pancreozymin-secretin stimulation, yielded positive results in 95 per cent of 78 patients with chronic pancreatitis. Each of the above-mentioned tests measured essentially a different facet of altered pancreatic function. The value of a profile of pancreatic function tests for the early diagnosis of chronic pancreatic disease is presented.

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Portioscope — A New Diagnostic Instrument

Byron C. Butler, M.D., Med. Sc.D.

An inexpensive diagnostic aid which could be employed to advantage by both specialist and general practitioner.

IN THE general examination of the medical patient, the traditional instrument, the flashlight, is inadequate. One needs a more intense and uniformly distributed light and a means of magnifying the area under observation. The instrument must be light-weight and hand-held and free of the restriction of an electric cord. The intensity of the light must be at all times uniform. The Portioscope is an attempt to fulfil these needs. Up to the present the author has developed three prototypes of an instrument designed to fulfill these requirements

PROTOTYPE I

The first instrument developed was crudely made from the essential parts (Figure 1). It consists of a twelve-volt transformer which connects to the 110 volt A.C. line, a switch on the transformer to turn it on and off and a connecting cord from the transformer to the Portioscope. The Portioscope consists of three parts: on the top is a tubular cardboard structure, the light source. It contains a reflector at the closed end, and an auto-headlight type bulb within the reflector. Light intensity is increased by a tubular reflector made out of a roll of aluminum placed inside the cardboard cylinder. There are no lenses. The erecting telescope is just below

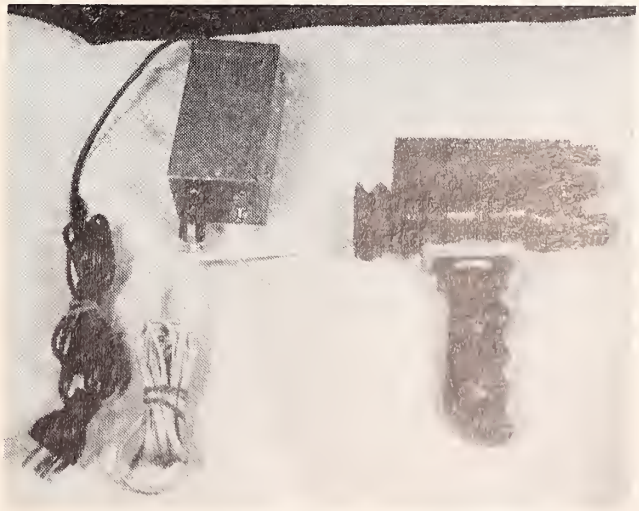


Figure 1 Prototype I

550 West Thomas Road
Phoenix, Arizona

the tubular light source. It consists of a rubber eye-guard surrounding the eye lens and the erecting telescope. The telescope measures 13.5 cm. in length and 3 cm. in diameter. It is a single brass tubular structure enclosing a magnifying eye-piece, an erecting prism, and an objective lens. The third part, the handle, is a detachable handle originally made for supporting a camera. The handle is connected to the erecting telescope by means of a rectangular piece of aluminum. The light source gives an intense light at the focal length of the instrument wihch is 30.5 cm., the field of vision is 5.5 cm. in diameter, and the magnification is 5 x.

PROTOTYPE II

The second prototype of the instrument was made specifically for the author by Delmarkel Developments, a company in England (Figure 2). In this instrument the light source is a small "headlight" on a ball and socket pivot (Figure 2). The light source measures 4 cm. in its greatest diameter and 5 cm. in length. The erecting telescope has been modified by removing a 3.5 cm. section of the instrument between the eye-piece and the erecting prism. The eye-piece is attached to an outer stainless steel cylinder which remains stationary and is connected to the handle. The erecting prism and objective lens are attached to an inner cylinder which slides within the outer supporting cylinder. There is a button on the underneath surface of the instrument and when this is pushed forward with the thumb, the inner cylinder is extended (Figure 2). Before extension the overall length of the telescope is 13.5 cm. and after extension it is 16 cm. This results in an increase in the magnification to 7 x and also a reduction in the field diameter from 5.5 cm. to 2.5 cm. When the thumb pressure is released the inner cylinder and objective lens returns to its previous position by spring action. The third part, the handle, measures 14 cm. in length and 4 cm. in diameter (Figure 2). At the top of the handle is a lever which can be moved either to the right or to the left to turn the instrument on or off. Within the handle are either two ordinary flashlight batteries or two rechargeable batteries. To be recharged, however, the batteries must be removed from the instrument and put in a recharger. This instrument has an advantage over prototype I in that there is no cord to interfere with its use as the physician examines first one part of the body and then another. It also has a disadvantage in that the light source is not quite as bright as prototype I.

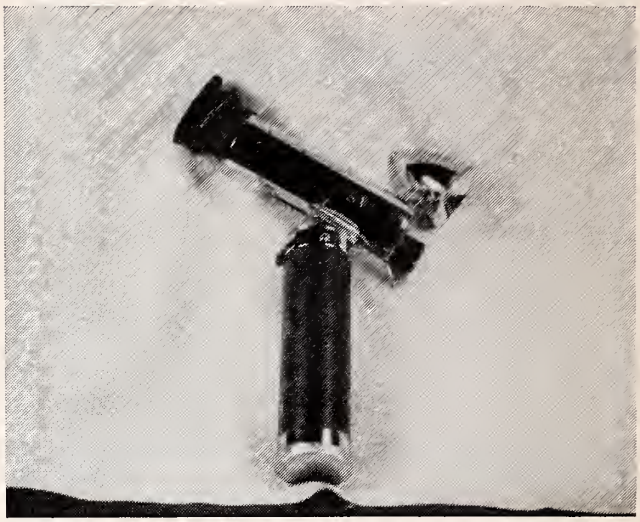
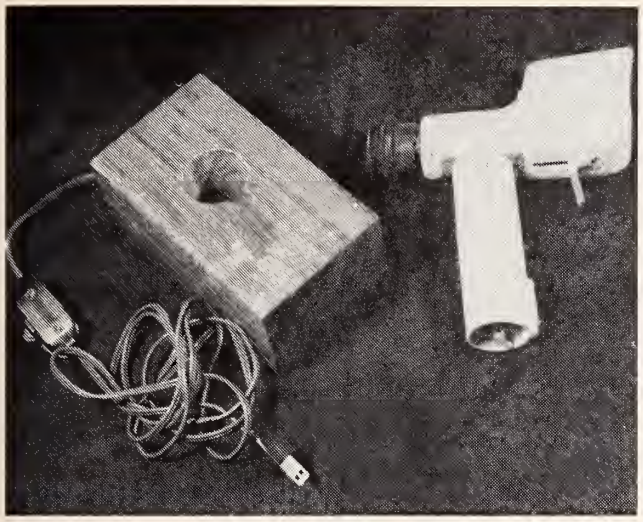
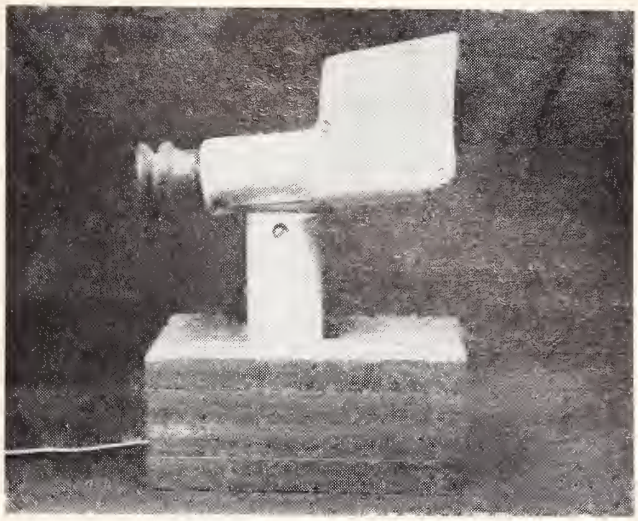


Figure 2 Prototype II

PROTOTYPE III

Prototype III is an experimental model made of balsa wood (Figure 3 & 4). In this instrument, a case consisting of two halves has been constructed to hold the light source and the erecting telescope. This instrument differs from prototype II in that the objective lens varies in distance by traction of the second and third finger upon the lever underneath the front portion of the instrument (Figures 3, 4). This is more like a pistol-grip mechanism. When the tension is released, because of spring action, the objective lens of the telescope returns to its full length, 16 cm. With complete traction on the lever, that is, pulling it toward the handle, the objective lens pulls inside the case 2.5 cm. so that the overall length of the telescope is reduced to 13.5 cm. The case enclosing the light source and the telescope measures 16.5 cm. in length, 9.0 cm. in height and 4.5 cm. in width. The upper portion of the instrument is attached to the handle by a vertical half-circle solid piece of metal which allows an upward and downward movement of the upper portion in relation to the handle. The handle contains two rechargeable batteries and at the base of the handle is a switch which turns the instrument on and off. When the instrument is placed in the solid-wood-block-holder (Figure 4), the batteries are recharged. At the base of the well in the "holder" is a connection to 110 volt A.C. line. The wood block measures 17.5 cm. in length, 10 cm. in width and 7.5 cm. in height.





Figures 3 & 4 Prototype III

I have used these instruments in the general examination of patients seen in my office during the past five years. By holding the instrument, one can use only the light-source to determine the pupil reaction to light and to look into the conjunctiva and the oral cavity. If there is any area which needs closer inspection, the instrument is brought up to the eye and the area in question is examined under magnification. The focal length and magnification can be varied as desired in prototypes II and III. Skin lesions, whether an area of infection or of possible cancerous growth, can be observed to determine more precisely their nature. The instrument is of great value in examining the cervix. In this examination, a vaginal speculum is put in the vagina to expose the cervix. The surface of the cervix is wiped clean with a cotton ball. The surface is observed to note any thickening of the mucosa, areas of erosion or areas of abnormal vascular pattern. These may be precancerous or cancerous. The cervix is then washed with 5 cc. of 2% acetic acid. The solution is sprayed onto the cervix through a 5 or 10 cc. syringe and a 20 gauge needle. The cervix is observed again. Areas of leukoplakia are made more obvious by this method and are more easily seen and identified when observed with the Portioscope. They appear as thickened white patches or areas of white mosaic on the cervix. The cervix is again wiped with a cotton ball and Schiller's solution, a 2% aqueous solution of Iodine, is sprayed on the cervix in the same manner. Again the cervix is observed through the Portioscope and the reaction of the mucosa to the Iodine is determined. Both the areas of leukoplakia found on the untreated cervix and after application of a solution of acetic acid have a high incidence of carcinoma-in-situ. The areas which are unreactive to Iodine may be carcinoma-in-situ but are more likely to be leukokeratosis of the cervix. By the use of this instrument, demonstrating areas to be biopsied and the concomitant use of Papanicolaou smear, the physician finds an increasing number of early cases of cervical cancer. The instrument may be used in conjunction with an anoscope to study the rectum and the anus, again looking for areas of ulceration, tumor growth and infection.

SUMMARY

The careful physical examination of the medical patient is still of utmost importance in medicine and cannot and has not been replaced by any technical instruments. In this examination, the instruments at hand are inadequate, except where specific instruments have been made, for example, the ophthalmoscope for examining the inner eye, the otoscope for examining the ear canal, and the sigmoidoscope for examination of the sigmoid. Except for these and a few other specialized forms of examinations, the physician depends mainly on a flashlight or a goose-necked lamp and his unaided vision. The Portioscope provides an intense bright light of uniform intensity, a light that is always maximum and a simple and rapid means of examining any area of the body surface under adequate magnification. Since the focal length can be easily changed by finger control, an area under observation can be easily and quickly brought into proper focus.

The Portioscope will be of great aid to the general physician and to many specialists. The instrument will find many uses in the physician's office, it should be part of his medical equipment taken on home visits and as a diagnostic instrument available in the hospital. The general practitioner will of course find many uses for this instrument in his daily practice. The ophthalmologist can use the instrument as part of his examination of the eye. The ear, nose and throat specialist can use the instrument in examination of the nasal passages and the oral cavity and the pharynx. The dermatologist can examine small lesions to determine whether or not they are malignant and can examine various types of skin lesions to ascertain the correct diagnosis. The obstetrician and gynecologist can use the instrument in examination of the cervix and when combined with study of the cervix after application of acetic acid and Schiller's solutions, he can find early cases of cancer of the cervix missed by the Papanicolaou smear. These are only a few of the practical uses available for this instrument.



Dr. Butler

Pulmonary Coccidioidomycosis — Outpatient Clinic



Arnold L. Serbin, M.D.



Herman van den Broeck, M.D.

Coccidioidomycosis is a frequently encountered disease in Southern Arizona. Much remains to be learned regarding its varied clinical manifestations and treatment. An Outpatient Clinic to study these problems has recently been established at Maricopa County General Hospital.

THE area in and about Phoenix, Arizona, is noted to have an alarmingly high rate of coccidioidal infection. Long noted as an endemic area, it is perhaps an epidemic area as well. Symptomatic cases are presented to the practitioner on an almost daily basis and yet the fundamentals as well as the intricacies of coccidioidomycosis are not clear. Basic understanding of the coccidioidin skin test, early clinical manifestations, and variations of the clinical course have not been thoroughly elucidated. A Coccidioidomycosis Outpatient Clinic was therefore established at the Maricopa County General Hospital, Phoenix, Arizona. Its purpose is to:

(1) Register as many individuals with known coccidioidomycosis as possible.

(2) Follow clinical variations.

(3) Treat on an outpatient basis the various forms of the disease.

(4) Tabulate information concerning the skin test, the compliment fixation and precipitin titres, and the radiographic manifestations.

(5) Evaluate the factors of pregnancy, diabetes and other co-existent disease with the clinical course of coccidioidomycosis.

(6) Determine and better evaluate the use of Amphotericin.

(7) Serve as a teaching clinic for the medical house Staff.

Osborn Medical Center
44 West Osborn Road, Phoenix, Arizona
and
Coccidioidomycosis Clinic
Maricopa County General Hospital, Phoenix, Arizona

During the preceding year approximately 70 cases were followed. They were grouped into:

(A) Disseminated forms.

(B) Pulmonary involvement with postive skin tests.

(C) Asymptomatic individuals with low compliment fixation titres of a chronic nature.

(D) Individuals with known previous coccidioidomycosis having a positive skin test as their only stigma.

Sources of referral to this clinic have been:

(1) The Maricopa County Health Department Chest X-ray Survey.

(2) The clinical material of the Maricopa County General Hospital.

(3) Referrals from private physicians.

Although radiographically similar, pulmonary coccidioidomycosis and pulmonary tuberculosis present with exceedingly different clinical courses. Whereas tuberculosis has been described in rather classic fashion, coccidioidomycosis presents with many protean manifestations. The general physician and radiologist often have been confused in diagnosis. This has been of particular significance in the County Hospital population where the incidence of pulmonary tuberculosis is higher than that in the general population. A prompt diagnosis of pulmonary coccidioidomycosis is important not only because of therapeutic differences but also so that the patient does not find himself hospitalized in the tuberculosis ward. Diagnostic similarities with malignant lesions, fungal diseases, and other inflammatory radiographic lesions are common. Co-existent pulmonary tuberculosis and coccidioidomycosis have been found in many instances.

The clinic sessions provide the medical house staff of the Maricopa County General Hospital an opportunity to evaluate and examine patients with coccidiodomycosis. A course of action is planned and follow-up information anticipated. Every age and racial group is included in the clinic. Representative case samplings have included osteomyelitis, abscesses, pulmonary infiltrative lesions with cavities and effusions, granulomatous fungating skin lesions, meningeal infections, systemic granulomas of varied forms, and probable coccidioidomycosis.

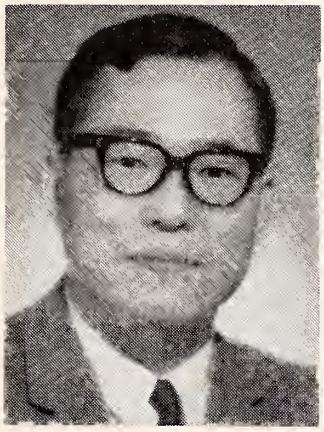
Many problems have been encountered during the short existence of this clinical endeavor. Follow-up study in a significant number of cases has not been good and outpatient administration of Amphotericin in an intermittent fashion has been found to be a disappointing feature. The chronic, asymptomatic nature of coccidioidomycosis is a definite factor. Inpatient treatment has also been disappointing because of the need for long-term hospitalization and the unpleasant side effects both temporary and permanent. There has been resistance by the patients in some cases to the intrathecal and/or intracisternal administration of Amphotericin. Not withstanding all these problems, several points have been noted. Among these have been inconsistencies between the clinical course and the serological compliment fixation and precipitin titres. Also a correlation between the size and reactivity of the skin test to the clinical course of the disease has not been found. Paradoxical increased sensitivity to the skin test antigen has been seen in individuals who had active disease in the past as compared to milder reactions in those that had current infection. Many observations of an empirical nature are being tabulated.

Because of the magnitude of the clinical case material in the Phoenix area, we hope this clinic will serve as a source for future statistical data. A systematic opportunity for the advanced study of pulmonary coccidioidomycosis has been undertaken. That coccidioidomycosis should be included in the differential diagnosis of any bizarre clinical syndrome in the Phoenix, Arizona area is already apparent.

SUMMARY

An outpatient clinic for the long-term study of coccidioidomycosis has been established at the Maricopa County General Hospital. The aims and purposes of this endeavor have been outlined. Variations in the clinical inconsistencies of coccidioidomycosis are described. The difficulties encountered with regard to follow-up evaluations and therapy were noted.

The Highlights of the 23rd International Congress of Physiological Sciences — September 1965 Tokyo, Japan — Part I



Thomas P. K. Lim, M.D.

This is the first time that this Congress was held in the Far East, and we are indebted to Dr. Lim for providing us with an interesting summary of some of the highlights. Thirteen separate symposia included such Topics as Pulmonary Edema, Transmitters in the Central Nervous System, Long Term Drug Administration, and Cardiovascular Integration.

THE International Physiological Congress has been held every three years since 1889 with some interruptions due to two World Wars. The last Congress was held in Leiden, Netherlands, and the 23rd Congress was held in Tokyo, Japan, September 1-9, 1965, with Dr. Genichi Kato of Keio University as President. The International Physiological Congress is under the auspices of the International Union of Physiological Sciences which is presently made up of the 37 member countries. The presidents of the International Union of Physiological Sciences in recent years have been C. H. Best (1953-1956) of Canada, C. Heymans (1956-1959) of Belgium, B. A. Houssay (1959-1962) of Argentina, and Sir Lindor Brown (1962-1965) of England. Perhaps the most important of all the functions of the International Union of Physiological Sciences is the improvement of communications between physiologists of different countries and every effort is made to achieve this valuable goal.

Tucson, Arizona

A commemorative medal of the 23rd Congress was presented to active members (Figure 1). On the back of this medal is a reproduction of a portion of the scroll of "Frolicking Animals" in Kozan Temple, Kyoto. This scroll, made in the 12th century, is one of the national treasures of Japan. The frog with a stream on the medal is a part of the brush painting of various animals with trees and flowers drawn in free animated style with satirical manners.

There were approximately 2,600 active members present, 1,200 Free Communications, 15 Invited Lectures, and 13 Symposia. The first International Symposium on Pulmonary Edema and Pulmonary Circulation was held on September 2. The pulmonary edema was discussed in terms of pathogenesis, special forms, and therapy. S. Rodbard from the City of Hope Medical Center, Duarte, California, presented data which showed that the permeability characteristics for fluid transfer from the pulmonary vascular membrance into the pleural compart-



Figure 1: Commemorative Medal of 23rd International Congress of Physiological Sciences

ment differed significantly from those for the airway compartment in the isolated lung lobe of the dog. His results showed that in the pleural space the direction and the rate of filtrations were proportional to the vascular-pleural pressure differences while filtration into the airway was inhibited as long as the vascular pressure did not exceed the airway pressure by 12 cm of water. At a higher transmural pressure however, filtration was very rapid. The retrograde perfusion produced more filtration than antegrade perfusion suggesting that the transmural filtration occurred at the venous end of the capillaries and perhaps at the venules.

There were two interesting papers concerning "centrally induced pulmonary edema." Apparently more and more patients have been seen with the centrally induced pulmonary edema because in nearly 70% of patients dying from traumatic or spontaneous intracranial hemorrhage, pulmonary edema has been found. Back in 1956 Marie and Patton postulated that preoptic pulmonary edema was a release phenomenon in which an "edema center" caudal to the pre-optic area in the hypothalamus became activated causing a massive sympathetic discharge and resulting in a shifting of blood volume from the systemic to the pulmonary circuit. A section of the splanchnic nerves or cord trans-section at the level of C_8 prevented the edema. L. D. Seager from Little Rock, Arkansas, presented data which demonstrated that the rapidly developing pulmonary edema in rats and dogs resulting from the bilateral injection of aconitine or veratrine into the pre-optic areas was associated with a marked increase in pulmonary venous and systemic arterial pressures. Pulmonary venous pressures as high as 45 mmHg and systemic arterial pressures of 400 mmHg have been attained in these experiments. Marked increases in total peripheral resistance often with diminished cardiac output and bradycardia were seen.

Three factors: namely, diminished cardiac output against the increased flow resistance, bradycardia and shunting of blood to the low pressure pulmonary circuit may individually or collectively account for the increased pulmonary circuit venous pressure and the edema. Since the massive sympathetic discharge is the cause of the centrally induced pulmonary edema, the pressure responses and edema are largely abolished by administration of dibenzyline and other sympatholytic agents but not by atropine. These data suggest that most, if not all, of the centrally induced pulmonary edema is associated with a strong stimulation of the central sympathetic mechanisms.

In relation to this paper another paper presented by J. W. Bean and his associates of Ann Arbor, Michigan, is interesting. This paper dealt with pulmonary involvement in oxygen toxicity and convulsive state. They challenged the commonly-held view that the convulsive seizures and pulmonary damage by the prolonged breathing of oxygen at increased concentration (namely; 40 to 100% of O_2 at atmospheric pressure)

were essentially independent phenomena and that convulsions were due to a direct toxic action of the oxygen on the central nerve system whereas the pulmonary damage was due to the toxic action of the oxygen or metabolites in direct contact with the lungs. They proposed that the pulmonary damage observed during high concentration oxygen breathing was not simply the result of direct irritative action of oxygen in contact with pulmonary tissues, but that it was intimately related to and probably dependent in part at least upon the central nervous system effects of oxygen and on neurogenic influence therefrom mediated to pulmonary tissues via the autonomics.

Their experiment showed that the sympathetic blocking agents such as TEA (tetra-ethyl-ammonium chloride) or chlorpromazine preventcd the pulmonary damage during high oxygen breathing. As concluding remarks of the symposium on pulmonary edema D. M. Aviado of Philadelphia, Pennsylvania, classified the pulmonary edema into four types: 1) Pulmonary edema arising from left ventricular failure which is seen in arteriosclerotic heart disease, mitral stenosis, aortic insufficiency, etc. 2) Pulmonary edema arising from intracranial lesions or head injuries. 3) Pulmonary edema initiated by intravenous injection of epinephrine in animals. The edema of this type is enhanced by injeetion of atropine and histamine but prevented by adrenergic blocking reagents and antihistaminics. 4) Pulmonary edema resulting from intravenous injection of alloxan.

One of the highlights of the symposium on pulmonary circulation was the presentation by J. B. West from England who discussed distribution of the pulmonary blood flow in the upright and supine positions as measured with the radioactive gases. Several years ago he demonstrated that the blood flow decreased more or less steadily in standing position from the bottom to the top of the lung, the flow being virtually nil at the apex. In supine position, however, the apical flow was virtually equal to the basal blood flow. Upon exercise the apical flood flow increased more than the basal flood flow in the upright position. This was due to an increased pulmonary arterial pressure and an increased pulmonary venous pressure resulting in more even distribution of blood flow during exercise. In heart diseases, particularly in mitral stenosis, the distribution of blood flow in the lung showed increased apical blood flow, sometimes exceeding the basal blood flow. The mechanism for this reversed blood flow pattern in mitral stenosis was attributed to the "interstitial edema."

Such a regional difference in pulmonary blood flow has been confirmed by Japanese colleagues, using pulmonary angiograms in different body postures. To study the role of the various pressures in the distribution of pulmonary blood flow, West has investigated an isolated dog lung preparation. With normal pulmonary arterial and venous pressures blood flow decreased from the bottom to the top of the lung much as it does in the intact human lung. When the pulmonary arterial pressure was reduced, the result was an unperfused area at the apex of the lung. When the pulmonary arterial pressure was raised abnormally high, the distribution of blood flow became more uniform. Increasing alveolar pressure had the effect of making the distribution more uneven and reducing the alveolar pressure had the opposite effect. Increasing pulmonary venous pressure resulted in a more uniform distribution of blood flow in the lower part of the lung.

These findings can be satisfactorialy accounted for by a scheme which divides the lung into three zones depending on the relative magnitudes of the arterial, venous and alveolar pressures. In zone 1, arterial pressure is less than alveolar pressure and there is no flow presumably because collapsible vessels are directly exposed to high alveolar pressure. In zone 2, arterial pressure exceeds alveolar pressure, but alveolar pressure exceeds venous pressure. This is the zone where the flow is determined by arterial-alveolar pressure difference, not by the arterial-venous pressure difference. Finally, in zone 3 venous pressure exceeds alveolar pressure and this is the zone where the flow is governed by the arterial-venous pressure difference.

This scheme emphazies the importance of the alveolar pressure in distribution of the pulmonary blood flow. The commonly held view in the past has been that the pulmonary blood flow is governed by the pulmonary arterial-venous pressure difference totaling neglecting the effect of alveolar pressure. In fact, the above scheme is based on the "Waterfall" hypothesis of pulmonary blood flow originally proposed by Permutt and Riley several years ago. The "Waterfall"

hypothesis of the pulmonary blood flow postulates that the pulmonary capillaries are considered to be collapsible tubes passing through a chamber in which they are surrounded by alveolar pressures. The pulmonary capillaries can support a pressure greater than the surrounding pressure but they collapse if the pressure inside the capillary is less than the surrounding pressure. Thus when venous pressure falls below alveolar pressure, end-capillary pressure falls to, but not below, alveolar pressure. Alveolar pressure accordingly determines the lower end of the pressure gradient which determines flow. Since alteration of venous pressure in the range below alveolar pressure has no effect upon flow, it is as if a waterfall exists between the capillaries and the veins. Flow over a waterfall is not affected by the height of the fall. On the other hand, when venous pressure exceeds alveolar pressure, end-capillary pressure also exceeds alveolar pressure, no waterfall exists, and flow is determined by the arteriovenous pressure differences. The raising of venous pressure in this region causes progressive diminuition of flow, and cessation of flow when venous pressure equals arterial. In spite of over-simplification, the "Waterfall" concept of the pulmonary blood flow is useful in calling attention to different mechanisms which may be operating in real life. Under normal conditions of spontaneous respiration, mean left atrial pressure is higher than alveolar pressure. Even under these conditions however, owing to hydrostatic differences in vascular pressures throughout the various portions of the lung, alveolar pressure exceeds pulmonary venous pressure at the apex of the lung. Thus it is not unlikely, especially under resting condition in upright posture, that alveolar pressure exceeds pulmonary arterial pressure at the apex of the lung. If so the capillaries can be collapsed and there would be virtually no blood flow at the apex. A little further down where pulmonary arterial pressure exceeds alveolar pressure, but alveolar pressure exceeds pulmonary venous pressure, the effective back pressure to perfusion would be alveolar rather than left atrial pressure. In the lower part of the lung, where venous pressure exceeds alveolar pressure, flow would be related to the arteriovenous pressure difference. Some of the confusion in the past concerning pulmonary vascular resistance stems from the result of using left atrial pressure as the effective back pressure when it is not appropriate to do so. Thus West's presentation in combination with the "waterfall" concept of the pulmonary blood flow underscores the importance of alveolar pressure in the distribution of pulmonary blood flow.

The titles of other symposia were: 1) Neural Mechanism of Conditioned Reflex and Behavior, 2) Excitatory and Inhibitory Mechanisms in Sensory Coding, 3) Structural and Chemical Aspects of Conditioned Reflex, 4) Biophysics of Excitable Membrane of Nerve, 5) Transmitters in the Central Nervous System, 6) Neural Control of Anterior Pituitary Secretion by Releasing Factors, 7) Electrophysiological Basis of Vision, 8) Structure and Function of Muscle, 9) Active Transport Across Biological Membranes, 10) Homeostasis of Body Fluid Composition, 11) Long-term Drug Administration and Chronic Toxicity, and 12) Cardiovascular Integration. As noted from these titles, the major interest and emphasis were in the field of neurophysiology and traditionally, this has been the leading force in Japanese physiology. The symposium on cardiovascular integration was chaired by M. B. Visscher of Minnesota. R. F. Rushmer of Seattle, emphasized the importance of heart rate rather than stroke volume in the regulation of cardiac output during exercise. P. I. Korner of Australia compared the effects of primary tissue hypoxia produced by the inhalation of carbon monoxide with that of the effects of alveolar hypoxia due to inhalation of low oxygen mixture. Symposium on homeostasis of body fluid composition was chaired by R. F. Pitts of New York, and G. Giebisch of New York presented data on single mammalian nephrons in relation to sodium-potassium transfer. O. H. Gauer of Berlin, Germany, emphasized the importance of the blood volume in the regulation of body fluid. The regulation of renal function by changes of both volume and osmotic pressure of the blood involves the ADH mechanism. When the two reflex mechanisms compete, the response of the kidney depends on the magnitude of the blood volume, according to Gauer's observation.

Among the invited papers J. E. Rall of Bethesda, Maryland, discussed the mechanism of action of the thyroid hormone. According to Rall, one of the most active fields of research on the thyroid at this time is on the mechanism of thyroid hormone. The studies have been concentrated upon the investigation of effect of thyroxine

(T4) or triiodothyronine (T3) in protein synthesis, or their effects on oxygen consumption. He pointed out the recent evidences which placed the effect of thyroxine on the mitochondrial swelling at the second phosphorylation. Thus it appears that the thyroxine regulates mitochondrial structure by affecting high energy intermediates, which in turn regulate water uptake.

H. Bartels and J. Metcalfe from Tubingen, Germany, discussed comparative physiology of placental gas exchange. The estimate diffusion surface for gas exchange in placenta in man is approximately 15 M^2 and three schemes of blood flow through placenta are postulated; namely, counter-flow, concurrent-flow, and multivillous flow systems. The counter-flow system (rabbit, goat) is more efficient when accompanied by a sufficiently thin separating tissue layer than a concurrent flow system. A multivillous flow system (man) has an efficiency intermediate between counter flow and concurrent flow systems. The oxygen affinity is higher in fetal than maternal blood, and thereby improves the oxygenation of fetal blood. This effect is pronounced in sheep, goats and rabbits but small in man, elephants, llamas and camels.

Y. Kuno of Japan presented a paper on the mechanism of human sweat secretion. In his experiments when 0.6 to 1 mg of adrenaline was injected subcutaneously in warm environment the sweating was conspicuously suppressed for 20 to 25 minutes after the injection. But with smaller dose of 0.1 to 0.3 mg the sweating was remarkably augmented after injection. When adrenaline was given in normal room temperature the sweating was observed on the palms of the hands. From these observations he concluded that the human sweating was caused by the neuromechanism and that adrenaline participated in promoting secretion by the humoral pathway.

To be concluded in the June issue of ARIZONA MEDICINE.

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Medical Ethics



Paul B. Jarrett, M.D.
President
The Arizona Medical Association, Inc.

Surprisingly, "Medicare" has done one thing that is proving to be beneficial to physicians.

Government's role under the new law has caused doctors to re-examine their role, and this has resulted in a new awareness of their professionalism, and this in turn has pointed up the importance of our Code of Ethics. These subjects we need to develop and dwell upon now more than ever.

Professionalism means that the profession professes something; specifically, it professes to do something that the individual cannot do for himself. In order to profess this and accomplish it, there is the obligation to study and acquire the necessary knowledge initially and then to keep up with advances and changes. The Professional must be oriented toward community-interest and away from self-interest. He must possess a high degree of self-discipline which is standardized through Codes of Ethics, voluntarily adopted and enforced through the professional group. Lastly, the rewards must be greatest in work — achievement and not in some end of individual interest.

The Code of Ethics under which we operate has been developed from about 1750 B.C., the time of the first recorded Babylonian Code of Hammurabi. The last revision was in 1957. Later, the Judicial Council of the American Medical Association in 1960 issued opinions and reports to clarify some of the ten short succinct sections which replaced the forty-seven sections previously existing.

These Principles of Ethics are basic and fundamental. They are guides to good conduct that men of enlightened conscience inherently know. In times like these we need to re-emphasize and re-study our ethical principles in order to uphold the honor and dignity of the medical profession, and to enlighten our conscience.

To this end, I have asked our Editor to plan and pursue an expanded program on Medical Ethics in this our Journal.

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Dr. Paul B. Jarrett's INAUGURAL ADDRESS

As President of The Arizona Medical Association, Inc. For the Year 1966

Being the first President of the State Medical Association under Medicare puts me in the same position as the man in one of Lincoln's stories. This individual had been tarred and feathered and was being ridden out of town on a rail. One of the local yokels asked him how he liked it. "Well," he said, "if it wasn't for the honor of the thing, I'd rather walk!"

One thing that is certain in a world of uncertainty is *change*. We have progressed a long way from the days of the ancient lithotomists to modern surgery, and we also have seen great changes in the way people think about a few fundamental things. When I say "people", I include physicians in that category too.

In the 75 years since the inception of the Arizona Medical Association, incredible changes have occurred in the world of Medicine. In fact, in the nearly 25 years since my own graduation, changes almost beyond belief have taken place. They encompass developments greater than all of those that have gone before and herald even greater advances to come. In the past quarter of a century, the body of medical knowledge has expanded further and faster than that of any of the professions. Nearly 90 percent of the biomedical scientists are alive and working today. Seven out of ten prescriptions today are for drugs not even known in 1950!

Not all changes have been true advances. Dr. William P. Williamson, of Kansas City, in an address to the AMA First National Congress on Medical Ethics and Professionalism, pointed out that we have "advanced" the state of the Art to a point where we can keep the heart and lungs of a patient functioning for a long time after his brain has died; and this is, in actuality, a prolongation of *dying* rather than a prolongation of *life*—hardly progress in the direction of the relief of suffering! Surely, no rigid rules are possible in decisions of this character; and, as Dr. Williamson pointed out, we must, of course, remember that life is the gift of the Creator, that each human life is Divine, but that our mission is to treat the *patient* and not just the *disease*. Our obligation is not only the prolongation of life, but also the alleviation of suffering.

75 years ago, the team approach to the patient was unheard of. This is a comparatively recent innovation. In old Tucson or Prescott, there was the physician and his patient — just the two of them. Today, we have not only the physicians of many specialized fields involved with the patient, but also we have insurance companies, welfare agencies, social service workers, and government as third parties. Indeed this is the Era of the Team! The patient, however, frequently never develops the rapport with his physician that the old timer did because he isn't sure whether he owes allegiance to an individual or to a complex. Add to this the "Therapeutic Paradox" that has been recognized since the advent of the "specifics", and the physician finds that the aura of mystery and authority is gone. The "Therapeutic Paradox" states that "the more successfully and specifically a physician treats a patient, the less is his personal prestige." Penicillin gets the credit, not the doctor.

There is no reason to be cynical about these events because they do represent progress, but in the scientific portion of the Profession; they represent regression in the portion of the *Art* of Medicine.

The problem of the incompetent physician becomes more important as the scientific portion develops. Dr. Appel, President of the American Medical Association, has urged the purging from our ranks of the incompetent, the disturbed, and the unfit. The number in the Profession who fall into these categories is few indeed, but a few

are too many. Some of us in Arizona are a little tired of the admonition from various sources that we must "clean our own house" where, in every instance, when we have attempted to do just that, we have been reversed by the courts. The notion that the rights of the individual should take precedence over the rights of society seems to have been our undoing. However, the Arizona Medical Association will continue, by every means, to protect and safeguard our patients from practitioners who have no right to treat the public, both within and without the M.D. category. Perhaps, in time the pendulum will swing the other way. In any event, the public must appreciate our efforts if we continue to do what is needful.

In recent years, we have been the object of considerable criticism from various sources, not all of which came from the enemies of Medicine, Some criticism that is well taken has come from our own ranks and has to do with our growing division into separate groups within the family of Medicine and a denial of the parent organization. The discipline of Medicine has become rather the discipline of Psychiatry, the discipline of Internal Medicine, the discipline of Surgery, and so on, with the physician coming to owe more allegiance to the specialty group than to the system of healing. Dr. William H. Gordon, of Lubbock, Texas, in a speech presented a few months ago to a group of physicians, likened the splitting of the physician from the "corpus" to a "youth who has been reared in a good home, been loved and taught the essentials so necessary for life, who has been guarded, protected, advised and suffered with, who now suddenly leaves and shrugs off any possible sense of obligation or moral indebtedness." Part of our indebtedness to our profession is to be responsible members of a working democracy. We have county, state, and national medical organizations, which attempt to carry out the dictates of the membership and work for the good of the Profession, the individual doctor, and society at large. Without dedication to these groups, the entire structure of Medicine will suffer. Dr. Gordon states that, without these far-reaching governing bodies, the practice of Medicine would become chaotic! In enumerating some of the areas in which our organizations have worked for the good of the community, let me mention our role in public health, mental health, disaster care, maternal and child care, safety, alcoholism, rehabilitation, sports medicine, occupational health, air and water pollution, school health, food and nutrition, and others. Every physician must be a part of these activities, part of the whole tradition, if we are to continue to preserve the values so dear to the Profession and so essential to society. The medical associations represent the Profession of Medicine, which, according to Dr. Gordon, is: "An order steeped in tradition and made up of all physicians. The young physician is invested in a mantle of honor, which he has yet to earn; he is given a social status that he must pay for; he is respected while, as yet, having done nothing to earn such esteem. The reason is simple: He is a symbol of the medical profession, which people traditionally have learned to honor and respect." Our first allegiance is to the order of Medicine, to the whole structure, not just a part of it. We must consider ourselves first as physicians and second as cardiologists, surgeons, general practitioners, or whatever. "Only in this way will the great body of medical knowledge and learning be preserved and handed on to succeeding generations of medical practitioners for their use and perfection." Likewise, we must reject sectionalism. We belong to the whole, not the center, the periphery, or the area south of the center.

"The evils of fragmentation, with first allegiance being bestowed on the splinter, has been the basis of much acrimony, discord, and hardship. It has resulted in specialist turning against specialist, certified against non-certified, academic against non-academic, salaried against non-salaried, clinically oriented against research oriented, administrative against non-administrative. It is tragic; and, while it is not our profession alone that is guilty of such narrowness, we should not grow complacent and be tolerant of it. All should work at being physicians, accept our responsibilities and repay our debts and express our gratitude by supporting the Profession as a whole."

Professor Everett Hughes, Ph.D., of the Department of Sociology of Brandeis University, said in 1963 that Medicine was "the queen of the professions." Two years ago, in March, the National Opinion Research Center, an affiliate of the University of Chicago, published a paper entitled "Occupational Prestige in the United

States: 1925-1963." There was only one occupation rated more desirable than that of "physician," and that was a Justice of the United States Supreme Court. Lawyers were tied for tenth place with diplomats and chemists; dentists, architects, and county judges were tied for fourteenth place, with psychologists and ministers in seventeenth place; congressmen and professors were tied for eighth place. Certainly, we should be occupied with self-criticism and should take note of the criticism of others, but we should reflect on our positive side as well. Dr. Walter Judd recently said that, in 1905, 28 percent of all college graduates were entering the field of Medicine. This prompted the President of Johns Hopkins at that time, a man named Gilman, to remark that the medical student was likely to be "one son of the family too weak for farm labor, too stupid for the bar, and too immoral for the pulpit."

In 1964-65, there were 19,200 applicants for 8,800 freshman medical college vacancies. Our problem for the future is not only elimination of the undesirables, but also the selection of those with the best motivation, the best minds, the best aptitudes, and the best morals.

Dr. Judd, when he addressed the Congress on Medical Ethics this past March, at which I was present, pointed out that today each of the 88 medical schools in the United States has voluntarily met the high standards established by the Liaison Committee on Medical Education. The Profession, acting through its own agencies, has established the basic criteria for approval of internships and residencies, and on-site surveys are conducted to be sure the standards are met. The Journal of the American Medical Association reported in August of 1965 that the number of continuing-education courses for physicians has increased almost 50 percent in the past five years and that there has been a marked increase in attendance at these courses. An editorial in the Journal's August ninth issue observes that the medical profession, in its achievements in continuing medical education, "is so far ahead of almost every other professional field . . . that there is hardly any basis for comparison."

The Medical Association and the American Hospital Association have done much to improve the quality of medical service in carrying out the program for accreditation of hospitals.

Physicians voluntarily, as members of a hospital staff, impose requirements on themselves to insure high quality medical care, grant privileges according to ability, supervise and accept supervision, review critically the handling of cases, and require adequate record keeping — and all of this without the use of "authoritarian" powers. It is not the Government, it is the medical staff, that has always been and is the guardian of the high quality of medical service rendered in our hospitals.

Another reason the physician is second only to a Supreme Court Justice in the public's esteem, according to Dr. Judd, is because no other profession has worked so hard to reduce its own income by eliminating or reducing the incidence of the diseases and suffering, which it is the physician's livelihood to treat.

Since 1935, physicians' fees have risen only 112 percent as compared with 123 percent in the overall cost of living, 136 percent in the total cost of medical care, and 480 percent in hospital daily service charges.

This increase in hospital costs deserves some explanation to our patients on our part since we are tarred with the same brush. Much of the increase is due to higher wages; much of it is due to the fact that so much more can be done for a patient in today's hosiptals. A few years ago, a case of mitral stenosis had a small hospital bill. Today, with cardiac catheterization, heart-lung machines, and open-heart surgery, followed by a sojourn in the intensive-care department, the comparison in costs is staggering. However, on the one hand, we had a patient for whom we could do little; today, he has a good chance of being restored to life and usefulness. Just what is that worth in terms of money?

A few years ago, the patient with failing kidneys didn't spend much money on hospitalization. Today, the artificial kidney is available to selected cases; and this department, along with the cardiology laboratory, is expensive and a money-loser, as are the out-patient clinic and the emergency room to name some more. The patient who enters the hospital to have his hernia repaired or his gall bladder removed is helping to pick up the tab for the case of mitral stenosis and the patient on the kidney machine; but this

apparatus is available to him and his family should they ever need it.

There is no question but what unusual and expensive facilities should be a community project, and many find objection in causing the sick public to provide for these facilities as well as the education of our nurses in private hospitals. It is to be hoped that these inequities will be corrected through private grants and bequeaths, greater voluntary prepayment and insurance, and incorporation of private nursing training into our educational system.

The Profession insists, and shall continue to insist, for the sake of the patient, that no payment plan interfere with or impair the free and full exercise of the physician's medical judgment and skill or tend to cause a deterioration in the quality of medical care.

The full understanding of this principle can make the public aware that Medicine's motives are ethical and professional and not political and economical!

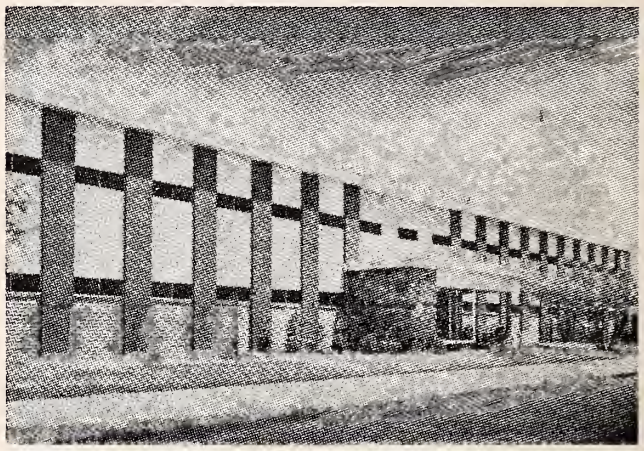
And now a few months hence, we begin the Great Society's initial experiment into Socialized Medicine on a grand scale.

Our position that we opposed Medicare because we believed it was immoral to make a young man with a family to raise, and children to educate, pay for medical care for his wealthy boss was not well taken by the public. It has never been our contention that the needy should be denied medical care, and, in fact, this was never the case before Medicare. Paradoxically, we have been made the guardians of a scheme we did not want; and, should it fail because of unrealistic actuarial planning, the medical profession may well be blamed. I am sure that, if the program proves to be financially disastrous, the Government will not point out that it is the result of chuckle-headed fiscal projection! We all have grave misgivings about the costs involved; and who do you think may well be the whipping boy two years hence?

Of one thing, I am sure: The medical profession will continue to do its best to insure that all patients continue to receive the finest medical care in the world today!

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Planning for the First Class

Among the most critical issues facing the planning team at this point in time are the problems underlying the admission of the first class of students. It would have been pleasant indeed if we could have announced that we would admit our first class in the fall of 1967 and then sat back and let the applications roll in. Unfortunately, it turns out to be a lot more complicated than that.

Since the University of Arizona had had an on-campus enrollment this fall in excess of 21,000 students, and since construction of classroom space for these students has not caught up with their arrival, overcrowding is the order of the day. This means that we can't "borrow" space to house our basic medical science faculty before the basic science building is completed and ready for occupancy. We are informed by spokesmen for the construction industry that the occupancy dates for this building should occur between 15 and 18 months after construction starts. Since construction was started the second week in April, the building will not be ready before late July of 1967. Assuming that we could time the arrival of our basic science faculty for that date, we would then have something less than 60 days to move into the building, design the curriculum, set up the library, dissecting rooms, labs, offices and classrooms before the students arrived. (The standard recommendation is that the key basic science faculty should be in residence approximately one year before the first class is admitted.) Of course, if the period of construction involves 18 months instead of 15, we won't occupy the building until late October. That poses some particularly interesting problems since, if we don't meet our deadlines, the final date for getting an "accepted" class into other medical schools is the preceding January!

Naturally, our expectation is that by the time the other medical schools close their acccptances we will know where we are and can advise our first class accordingly. Of course, we may also be able to consider starting the class in another structure (such as a quonset hut, private home, empty store, etc.) while awaiting occupancy of the basic science building. This sounds somewhat more complicated than it need be since we might be able to juggle the curriculum of the first year and assign all of the time (prior to getting into the building) to a single subject such as anatomy.

If much of the foregoing seems indefinite, several decisions about the first class have been made. For example, we will entertain applications after July 1, 1966 and through February 1, 1967. Following a preliminary screening, appropriate interviews will be held. Acceptance notices will then go out and students will be asked to respond within the prescribed two weeks. (If the student is subsequently accepted elsewhere, he can take his pick of which acceptance to honor up until January 15, 1967.)

The building itself has been designed to accommodate 64 students in each class. At first, it will not be possible, nor even desirable, to admit a full class. We will, however, try to admit 32. Naturally, first choice will be reserved for the student who is a resident of Arizona. Next, students who are resident in one of the WICHE states that Arizona has been dependent upon (for the education of her students in medicine, veterinary medicine, dentistry and forestry) will receive preference. This would include Washington, Oregon, California, Utah and Colorado. Of course, we will then join these states in helping students from Nevada, Idaho, Wyoming, Montana, Alaska and Hawaii — all of which are also WICHE states but don't have medical schools within their borders.

Last, tuition has been set at $600 a year for the resident student and $1,200 for the non-resident student. Generally, out-of-state tuition is approximately double the tuition for in-state residents and the amounts which Arizona will charge are very much in line with comparable institutions elsewhere.



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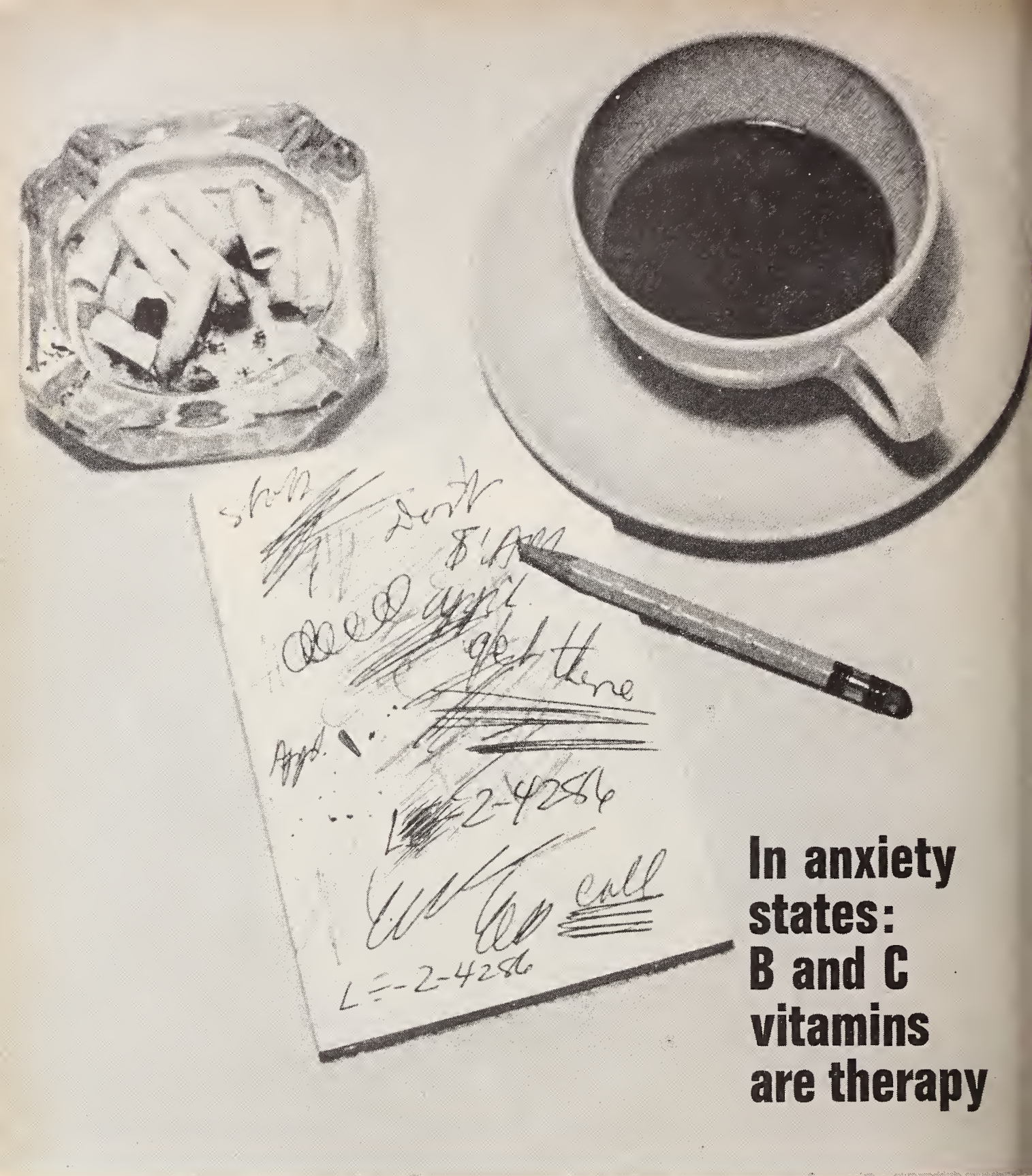
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Communication—

Webster defines COMMUNICATION as "a verbal or written message; an exchange of information; a process by which meanings are exchanged between individuals; a technique for expressing ideas effectively in speech or writing, or through the arts."

In speech or writing or through the arts. Lincoln's Gettysburg address. The Code of Hammurabi. Cellini's work as a goldsmith. Longfellow's verse. Communications they were "in speech and writing, and through the arts." They were also dignified, thoughtful, reflective, and beautiful. They were masterpieces of expression. They were stimulating.

With the end of World War II came a revolution in electronics and technology and the advent of the Space Age. There came also a revolution in the rate with which technology and ideas were conceived and implemented. The entire concept of communication exploded not only with technically perfect audio-visual aids, but with the speed with which these aids were brought to practical conception and adoption. The computer and a computer-like skill have become the epitome of success and the measure of accomplishment.

However, no modern computer is able to supply the human elements of understanding, tolerance, patience, and evaluation to our modern communications. No modern computer has been taught to think or to rationalize; to measure joy or grief; happiness or despair.

Unfortunately, the speeds and accelerations of modern technology appear to be reflected in our own lives, in our own practices and approaches to medical problems, and in our own personal associations and communications. We are prone to react before we evaluate, prone to react with a minimum of reflection, prone to substitute sarcasm for dignity, idioms for lucid expression, and terseness for conciseness. We appear to communicate with difficulty.

With the technological revolution came social revolution. With the social revolution came increased application of social legislation and Public Law 89-97, commonly known as Medi-

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Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.
4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
5. The Journal reserves the right to edit all material.
6. Reprints will be supplied to the author at printing cost.

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care. Somehow, Webster's definition of COMMUNICATION is difficult to apply. Here communication, in the classic sense of the word, is so minimal that actual understanding is difficult, to say nothing of application and implementation.

Now, more than at any other time, do we have need for COMMUNICATION. Let there be ideas expressed effectively not only in speech and writing, but through the arts, in this instance, the Art of Medicine. We must communicate with each other as individuals, as individuals with groups, and as individuals or groups with larger bodies of population. The implementation and application of Public Law 89-97 will be ours. Now, more than at any other time, must our communications express dignity, thought, and reflection, not spontaneous, impromptu, impassioned harangue.

In our future meetings and discussions where basic, fundamental principles may be matters of debate, let us at least remember the primary concepts of good communication.

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The Lesser Evil



William B. McGrath, M.D.

WE ARE often asked whether a disorder is functional or organic. The question is misleading. The terms do not pertain to the disorder itself but to its source; i.e., to the level of the organism from which it arose. The quickened pulse of (mental) excitement or (physical) exertion is the same. It is as hard to keep from running as it is to run.

The beleaguered individual must do one or the other, stay or go.

In almost every human dilemma the choice is not between a right decision and a wrong one. The alternative — how to resign one's self to a miserable situation or whether to rebel — is the choice of the lesser evil.

Unfortunately there is neither sanction nor solace in supposing that one has embraced the lesser evil. The anguish of recommending therapeutic abortion, for illustration, is not assuaged by realization that the mother's life or sanity is at stake.

A person's only escape from unbearable oppression may be into a blind alley of adultery or alcoholism or neurotic illness. The one gloomy course will not be illuminated by the greater darkness of the other two.

Beaten into submission at one end of the hall or threatened by incest at the other, a boy in desperation may go into the bathroom and put on women's clothing. Effeminacy as (literally) a way of life will not have become desirable just because the alternative was schizophrenia or suicide.

In an original net of circumstances the most offensive personality traits may have been absolutely necessary for survival. (An emphysema, most unwelcome today, may yesterday have kept the patient from succumbing to asthma.)

The inadequate personality surely sensed some mortal danger in competition or success, when he stood in the menacing shadow of a jealous father or a bullying brother. The schizoid personality had better avoid close relations with others and learn to keep his thoughts to himself, if the others would always misunderstand and punish him. To pick his way past treacherous mines and traps in his pathway the paranoid had to develop his exquisite sensitivity. Sudden shifts of acceptance or rejection jerked the cyclothyme to extremes of elation or sadness because his very life depended on them. The compulsive perfectionist could keep his place in the family only by constant vigilance. And the passive-aggressive personality had no safer way to resist or cope with his otherwise overpowering adversaries.

A man of ordinary decency got drunk last

Thursday night. Shame on his drunkenness? Yes. Shame on him? Oh, no; he had some claim to anaesthesia while the dull ripsaw of fate was amputating a painfully illicit relationship more important to him than his arm or leg. It is easy to deride the suicide gesture of the hysteric if we forget that no one heeded his other cries for help.

We are not licensed to give something called emotional support on a charitable assumption that the nervous patient is doing the best he can. Such would be mindless and maudlin because the patient is usually not permitted that choice. From the professional man the patient has a right to ask not for sympathy but at least and always for understanding.

Understanding begins with the presumption that the individual has chosen — and has had to choose — the lesser evil.

An individual may seem to be resisting our efforts to allay his anxiety or to quiet his psychophysiological distress. He will be disconcertingly different from the patient with structural disease who seeks and can afford a simple cure. The nervous person's request for relief is a request that we take time to realize the insolubility of the dilemma confronting him. Only then will our compassion be intelligent and objective. Needless to say the patient is not soliciting pat little psycho-sermons and exhortations. He will only be abandoned and insulted by premature explanation and stupidly superficial recommendations.

The physician, if no one else, should be mindful that people seldom break down under gross external stress. A mother, for example, may bear with fortitude, the indignities of her husband's alcoholism or infidelities. She has something tangible to blame for her unhappiness and she can still pray for a better tomorrow. Too late her husband may reform and promise restitution. If she can no longer respect or welcome him, then without even the virtue of sacrifice she must despair.

Lastly, the patient is entitled to save face. A psychosomatic illness may be the only remaining prop against greater catastrophe or collapse. It is sometimes a cruel disservice to coerce him too promptly and dogmatically to psychiatric care.

co—op.er.a.tion, co.op.er.a.tion, co.op.ēr.a.tion (kō—op'er—ā'shen), n. 1. a co—operating; joint effort the benefits of which are shared by all members.

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Background Information on Proposed AMA Dues Increase

The American Medical Association House of Delegates when it meets in Chicago in June will take final action on a recommendation of the Board of Trustees to increase annual AMA membership dues by $25, from $45 to $70, effective January 1, 1967.

The recommendation was considered by the House of Delegates at the Clinical Convention in Philadelphia in December, 1965. The committee which considered the proposal reported to the House of Delegates that it was in agreement with the Board of Trustees that "it is not realistic to expect that we can limit tomorrow's programs to yesterday's income."

After floor discussion, the House of Delegates voted approval of the Board's recommendation, subject to final action by the House at the Annual Convention in June, 1966.

Since the meeting of the House of Delegates in Philadelphia, a number of physicians have requested facts on which the Board's recommendation was based. Consequently, the following paper has been prepared.

COST OF DOING BUSINESS

The American Medical Association is a not-for-profit professional scientific organization engaged in services to the medical profession and the general public. But the AMA is also a "business" organization — an employer and a property owner — as inextricably caught as any other in the upward price spiral and as buffeted as any other by inflationary forces which have cut the purchasing power of the dollar by more than 50 per cent in the last quarter of a century.

Just as the costs of operating a physician's office have increased, so have the costs of running the AMA. For example:

— A major activity of the AMA is communications, with about 30 per cent of the budget expended for paper, printing and postage. In 1960, production of a typical page in its publications cost the AMA 11 cents. This year, because of increased and increasing costs, the AMA will spend 31 cents to produce that same page, an increase of more than 181 per cent.

— Between 1959 and 1964, AMA real estate taxes almost doubled, from $66,000 to $112,000. The estimated tax bill for 1965 will be $200,000, an increase of more than 200 per cent over 1959.

— Office furniture costs 7 to 10 per cent more than in 1960, and stationery and other office supplies have increased 10 to 15 per cent.

— The AMA, obviously, must compete with private businesses in the market place for personnel, offering competitive salaries and a program of employee benefits, including life and health insurance and a retirement program. In the last five years, the AMA contribution to these programs has more than double, and in the same period, starting salaries for office employees in the Chicago area have increased by 25 per cent.

— In 1960, social security taxes paid by the AMA totaled $160,000. This year, because of enactment of Medicare with added social security benefits, the AMA will pay $276,000 in social security taxes, an increase of more than 72 percent. Additional increases in the future are built into the law.

— Bulk mail rates have climbed approximately 20 per cent since 1960. As an example of the impact on the AMA budget, it now costs $43,000 more to mail the same number of copies of *JAMA* as were mailed in 1960. When the AMA mails a one-page letter to each physician member, the cost is more than $11,000.

Inflation, which has been adopted as a national policy, is a growing economic burden. Consequently, it must be recognized that the

cost of doing business will continue to rise in the foreseeable future.

AMA MEMBERSHIP

The present membership of AMA is 210,938. Of this total, 165,712 are dues-paying members. Those who do not pay dues include interns and residents, physicians retired from active practice, those temporarily in military service, others who serve full time in the military or other government agencies, and some physicians who, because of accident or illness or for other reasons, have had their income partially or totally cut off.

INCOME AND EXPENDITURES

The AMA estimates that gross income for 1966 will total $27,406,000. This will come from the following sources:

Advertising:	$12,362,000	(45.11%)
Membership Dues:	7,522,000	(27.44%)
Subscriptions:	2,307,000	(8.41%)
Exhibit Space:	600,000	(2.19%)
Investments:	193,000	(.70%)
Other:	4,422,000	(16.15%)

It should be noted that membership dues, now $45 a year, will produce less than 28 per cent of AMA income in 1966. If the AMA did not have other sources of income — and many associations do not — the current level of programs for the profession and the public would require annual dues of $165 per member. It is proposed to raise dues to $70 a year, increasing revenues from this source by about $4,143,000.

AMA dues compare favorably with other organizations, particularly labor unions. A Chicago newspaper reporter earning $9,000 a year pays $144 a year to the Guild. Air line pilots pay 1.5 per cent of their gross salary to the Air Line Pilots Association, less 10 per cent if the dues are paid in a lump sum. A pilot earning $20,000 a year pays $300 on a quarterly basis or $270 annually.

Members of the American Chiropractic Association pay $100 a year for general membership, plus additional dues to state organizations. Members of the other chiropractic group, the International Chiropractic Association, pay $195 a year, plus state organization charges.

Osteopaths pay $100 annual dues to their national organization, plus whatever is levied for state organizations.

The AMA budget for 1966 is narrowly in balance, after operating deficits totaling more than $1,000,000 were incurred in 1964 and 1965. Reserves were depleted by the amount of the deficit. The budget for 1966 has been reviewed exhaustively by the Board and by headquarters staff to avoid another deficit. Wage and salary increases have been minimized and all travel and meeting costs have been reduced by 10 per cent. Some programs have been curtailed and some deferred. Departmental budgets are subject to periodic review by department and division directors in a continuing effort to further reduce expenditures.

The Association has progressively increased revenues from sources other than dues. The AMA now charges for certain pamphlets, for example, and this source is expected to produce $457,000 in revenues during 1966. In total, income from sources other than dues has been increased since 1960 by more than $7,500,000. Some added income from these sources is possible in the future, but there is a limit beyond which this revenue cannot be increased. Other income cannot be increased sufficiently to eliminate the need for higher dues. Further, other sources of revenue are inherently less stable than membership dues and, therefore, dependence on them for a disproportionate amount of income is unwise.

The Board of Trustees believes that if the Association is to rest on a sound financial foundation in carrying out its mission of service to the medical profession and to the public, a larger proportion of financial support should come from the membership.

As stated earlier, the 1966 AMA budget is narrowly in balance. Proposed expenditures total $26,620,000 against estimated income of $27,406,000 leaving a balance of approximately $786,000. Sound budgeting practices require a margin for contingencies of substantially more than three per cent. It should be remembered that an AMA budget reflects revenue forecasts 14 months in advance and since most of this income is from non-physician sources, it is subject to significant and uncontrollable fluctuations.

THE NEED FOR ADDITIONAL REVENUE

It is the policy of the Association to try to

maintain reserves sufficient to finance its essential programs for one year. AMA's liquid reserves now are approximately $8,000,000. This amount is insufficient to carry on essential programs in the event an economic calamity should seriously reduce or wipe out large sources of revenue. Consequently, prudence dictates restoration of reserves, depleted in 1964 and 1965 by more than $1,000,000. Further, as operating expenses continue to increase, further funds should be set aside.

Physicians, appropriately, will ask: "If the increase in dues is approved, what will the additional $4,000,000 be used for?"

The answer is that it will be used to cover the increased cost of current operations, to conduct programs that maintain the leadership demanded of the AMA by its members and by the public, and to replace reserves reduced during the past 24 months. The AMA, by its nature, cannot escape larger responsibilities in the future without abdicating its traditional leadership in the vast and increasingly complex environment of medicine and health.

What physicians would favor the withdrawal by the AMA from its century-old role in improving standards of medical education? By 1970, more than a dozen new medical schools will have opened their doors and by 1975 at least half a dozen others will be constructed. This growth will demand more from the AMA in money and manpower, not only to expand its accreditation program but to step up its activities designed to recruit top students for careers in medicine.

The growing physician population constantly adds to the Association's membership service programs. Record keeping also increases. And more physicians generate new demands on the Association for continuing education.

The already substantial AMA program in the field of health education must be expanded in response to public demand. A recent public opinion survey shows that the people want more health information and they expect the medical profession to provide it.

A number of important programs of the AMA have been slowed down to help alleviate the strain on the Association's financial resources. Some should be expanded rather than curtailed. A case in point is the drug information program, one of the most significant undertakings by the Association for the benefit of the public and the profession in recent years.

Another is an intensified educational program for the profession and the public on the cult of chiropractic as well as quacks and charlatans and their nostrums and gadgets.

The Association's commitment to better health for all cannot be confined to the boundaries of the United States but must be international in scope, making continued participation in the World Medical Association mandatory.

The joint hospital accreditation program is constantly growing and will require even more resources with the addition of nursing homes in the accreditation program.

Environmental health (including air and water pollution), occupational health, preventive medicine, human reproduction, and mental health will grow in importance and require increasing attention as the nation's population expands.

In all these areas, and in many others, the medical profession must exercise continuing leadership or abandon the field to others.

The enactment in 1965 of a series of laws designed to give government vastly more power in the financing of health care has placed on the AMA additional obligations and responsibilities that cannot be met without increased revenue. Medicine needs to improve and strengthen non-governmental approaches to health-care financing and to guide into the best possible channels the implementation of the new laws. Thus, the urgent recommendation for increased dues reflects, in part, the new situation created in 1965 by the passage of Medicare and other laws that will have a significant impact on every physician.

The Board of Trustees also believes that an institutional advertising program would be of inestimable value to the Association and to the individual physician. Such a program, utilizing various advertising and communications techniques, would be designed as an educational tool to familiarize the public with the significant accomplishments of the AMA and the medical profession in bringing better health care to the American people. A program of this nature was among those which the Board was compelled to defer for financial reasons.

Surveys conducted by the Opinion Research Corporation, Gallup and others show that there

is a solid base of good will toward the AMA and the profession among the people. The Board believes the AMA should build on that base, not rest on it.

SERVICES TO THE PROFESSION

What the individual physician gets from membership in the AMA depends partly on the physician himself. Some of the benefits are provided as a matter of routine; others are available for the asking. Some can be valued in terms of dollars; others cannot.

For example, dues-paying members receive the weekly *JAMA*, their choice of one of the 10 specialty journals, a reception room copy of *Today's Health*, and *The AMA News*. Thus, their $45 in dues brings them without additional cost, subscriptions valued at $34.

Other benefits to the physician include:

— The latest developments in medical science presented at the Annual and Clinical Conventions.

— The services of the Washington office which include continuing liaison with members of Congress and government agencies on a wide variety of matters affecting medicine as well as the handling of requests from physicians and medical societies for information and assistance.

— A library of medical films, the largest in the world, each film available on request.

— A variety of practice management aids to assist the physician in operating his office efficiently and economically.

— Numerous authoritative health education pamphlets and other materials for distribution to patients.

— Expert advice on medicolegal problems.

— A comprehensive library service.

— A physician placement service to help the physician who wants to relocate to find the community best suited to his desires.

— A huge storehouse of information on a variety of scientific subjects, including drugs and drug therapy, foods and nutrition, pesticides and poisons, and numerous others.

— Hundreds of meetings annually for constructive evaluation and decision on important medical and socio-economic developments.

* * *

Members of the Board of Trustees realize that the future effectiveness of the AMA will depend, in part, on the continuing strength of local and state societies which compose the federation. Board members are keenly aware that most of the forces which make an increase in AMA dues necessary are also squeezing the resources of state and local societies. They realize, too, that many of these state and local societies urgently need to increase their dues.

Nevertheless, every member of the AMA will recognize that the effectiveness of the Association will depend on the resources it is capable of assigning to a given objective. The strength of the AMA will rest, not alone on the scope and significance of its programs, but more importantly on the support given the Association by the membership.

In 1965, about 1.9 million persons visited the Washington Monument. Had the 1935 death rate of TB, flu, pneumonia and syphilis continued to 1960, about 2 million persons — or more than the total who visited the Monument in 12 months — would have been dead from one of the four diseases. Drugs helped make the difference.

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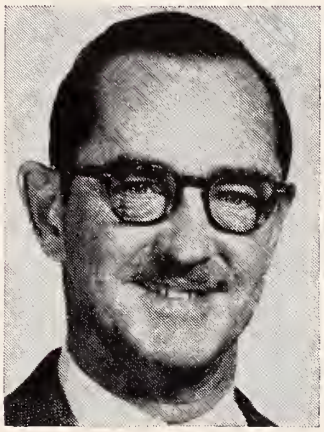
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Samuel J. Grauman, M.D.
1910-1966



Dr. Samuel J. Grauman died on January 3, 1966, while delivering a Masonic eulogy at the funeral of a friend. This physician who had devoted the greater part of his professional life to the study and treatment of heart disease succumbed to an occlusion of a coronary artery.

Dr. Grauman was born in Milwaukee, Wisconsin, on October 31, 1910. He graduated from Yale University and matriculated at the University of Chicago in 1931. At a time when medical students at the University could choose to do their clinical work at Billings Hospital or at Rush Medical College, he elected the latter course and established a brilliant scholastic record. Following his graduation he worked in the pathological laboratories at Cook County Hospital during the stimulating tenure of Dr. Rudolph Jaffe and continued his training at Mt. Sinai Hospital in Milwaukee. Shortly thereafter, he moved to Tucson and was soon recognized as an outstanding internist. He served in many positions of honor and respect in Tucson and Arizona.

During his term as a member of the Board of Censors of the Pima County Medical Society his compassion and judicious understanding served his profession and community wisely. He had been elected Chief of Staff at St. Mary's Hospital where for years he was the head of the Department of Electrocardiography. He served in a similar capacity at St. Joseph's Hospital and for years was a consulting cardiologist at Pima County General Hospital. Dr. Grauman had been appointed to two terms as the Governor of the American College of Cardiology in Arizona, a position he was occupying with distinction at the time of his death. He had recently completed his service as the President of the Arizona Heart Association and previously had been President of the Southern Arizona Heart Association. Since the organization of the Arizona Heart Association, Dr. Grauman had been an active supporter of this organization and was a member of the Board for many terms. He recently had been the chairman of the Cardiovascular Consultation Board of the Industrial Commission of Arizona.

A member of many professional and fraternal organizations, Dr. Grauman was an unusual gentleman of charm and culture. He was an excellent "ham" radio operator and in connection with this hobby he devoted much time and effort to the Civil Defense program.

He is survived by his widow, his son and two step-sons. His loss will be felt for a long time by his many sorrowing friends and his community.

In composing a memorial it is most difficult to do justice to Dr. "Sam" Grauman.

Mayer Hyman, M.D.

Richard H. Mayne, M.D.
1918-1966

The room in the ATO fraternity house at Tucson was filled with beautiful music. Around the room sat a group of young men listening intently to an artist at the piano. This was no ordinary pianist, but a musician of the highest caliber. The artist was Richard Hoyt Mayne. Such was my introduction in 1937 to Dick, who was to become my best friend.

He was one of those rare individuals — a native Arizonan. Dick was born in Bisbee, attended high school in Miami, Arizona; undergraduate school at the University of Arizona,

then medical school at Duke University, where he met his wonderful bride-to-be, Elsie. He interned at Los Angeles County General Hospital and then entered the service in the Army Medical Corps where most of his time was spent on France. In 1946 he returned to Phoenix and took a year's residency in General Practice at St. Monica's Hospital. He then established a practice in South Phoenix.

He was a remarkable man in so many ways. During the past ten years, in addition to the piano, he became intrigued with the organ and was one of the Valley's finest organists. His personality was outstanding; to know him was to like him. His wonderful smile, sunny disposition and warm friendly manner won him scores of friends and admirers. These qualities together with his superior intelligence, devotion to his work, compassion for and understanding of his patients, plus unusual skill in administering to them, made him the outstanding physician he was.

He represented our profession in an exemplary manner and as a result achieved a practice few of our colleagues enjoy. His leadership qualities were quietly but repeatedly demonstrated, not only in his professional work but in several civic and religious organizations. To these he gave freely of his time and effort, and in addition, was extremely generous with his support.

But his great love was for his family, his wife, Elsie, and their two daughters, Carol and Betty Ann. He adored them as they did him.

It is difficult for many of us to understand, to comprehend that he is gone. He was so young, so talented, so needed. All of us will miss him, no one can take his place. He was the kindest, gentlest man I have ever known. I can only be greatful for the rare privilege of being his friend.

Jack Zeluff, M.D.

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Diplomates of American Board of Radiology

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Reporting for the Year 1965

"Since the inception of Blue Cross in Arizona in 1944, and Blue Shield two years later, the plans have paid out over $117 million for the care of subscribers. This is 90 percent of the total income. No other organization pays back so much of its income to the public it serves."

This information, and much more of a similar nature, is contained in the just-released annual report for Arizona Blue Cross/Blue Shield.

Enrollment showed a substantial increase during the year, with Blue Cross going to 214,641; Blue Shield Surgical to 204,834; and Blue Shield Medical to 177,699.

"It is interesting to note that we acquired new groups never previously enrolled. We also had noteworthy success re-enrolling groups that had gone over to commercial carriers in recent years. All told, our sales staff enrolled over 250 new groups last year, one of the best efforts in our history. Along with this, considerable membership gains were made in the Non-Group and Senior Citizen categories."

"Our expenditures for the various divisions of the organization were carefully budgeted during the past twelve months in an effort to provide the greatest amount of care for the public on the most economic basis. This was accomplished."

A further breakdown reveals during the past year that out of every dollar taken in, Blue Cross paid 93.01 cents back for the care of subscribers, and Blue Shield 87.64 cents. Blue Cross operating expense was 5.26 cents, and Blue Shield 11.35 cents. Net income for Blue Cross was 1.73 cents, and for Blue Shield 1.01 cents out of every dollar taken in.

A look into the early part of 1966 shows a continuing enrollment increase with the City of Phoenix having been re-enrolled after an absence of a number of years. In the first two months of this year, 63 new groups had been brought into the organization.

Where The Money Goes

The latest figures available on American's spending habits are for the year 1964. These figures from the United States Department of Commerce reveal that we are increasing our spending for health care. However, we still spend more for tobacco than for hospital care and more for cosmetics and the haircut every two weeks than for doctor bills.

Total outlay for health care in 1964 totaled $25.2 billion. That's an increase of 7.8% over the previous year's spending. Breaking the health dollar down, hospitals received the largest share, about 30 cents of every dollar. In dollars this amounted to $7.6 billion. This compares with $7.8 billion spent for tobacco products, notwithstanding the warning printed on cigarette packages.

Other parts of the health care dollar are divided in this manner: 17 cents for drugs; 10 cents for dentists; 7 cents for health insurance; 4 cents for appliances; and 5 cents for miscellaneous.

This leaves 27 cents that goes to physicians. This amount has declined only slightly over the years. Twenty years ago, physicians were the recipients of approximately 28 cents of every health dollar spent.

It is interesting to note that expenditures for physician services totaled $6.8 billion in 1964. This compares with $7 billion for such personal items as cosmetics, haircuts, and toiletries.

The Department of Commerce reported these expenditures for health care in 1964: Hospitals, $7.6 billion, up 12.5% over 1963; Physicians, $6.8 billion, up 5.6% over 1963; Drugs, $4.4 billion, up 5.2%; Dentists, $2.4 billion, up 5.8%; Health Insurance, $1.8 billion, up 6.3%; Appliances, $1.1 billion, up 9.7%; and other services, $1.2 billion, up 6.9% over 1963.



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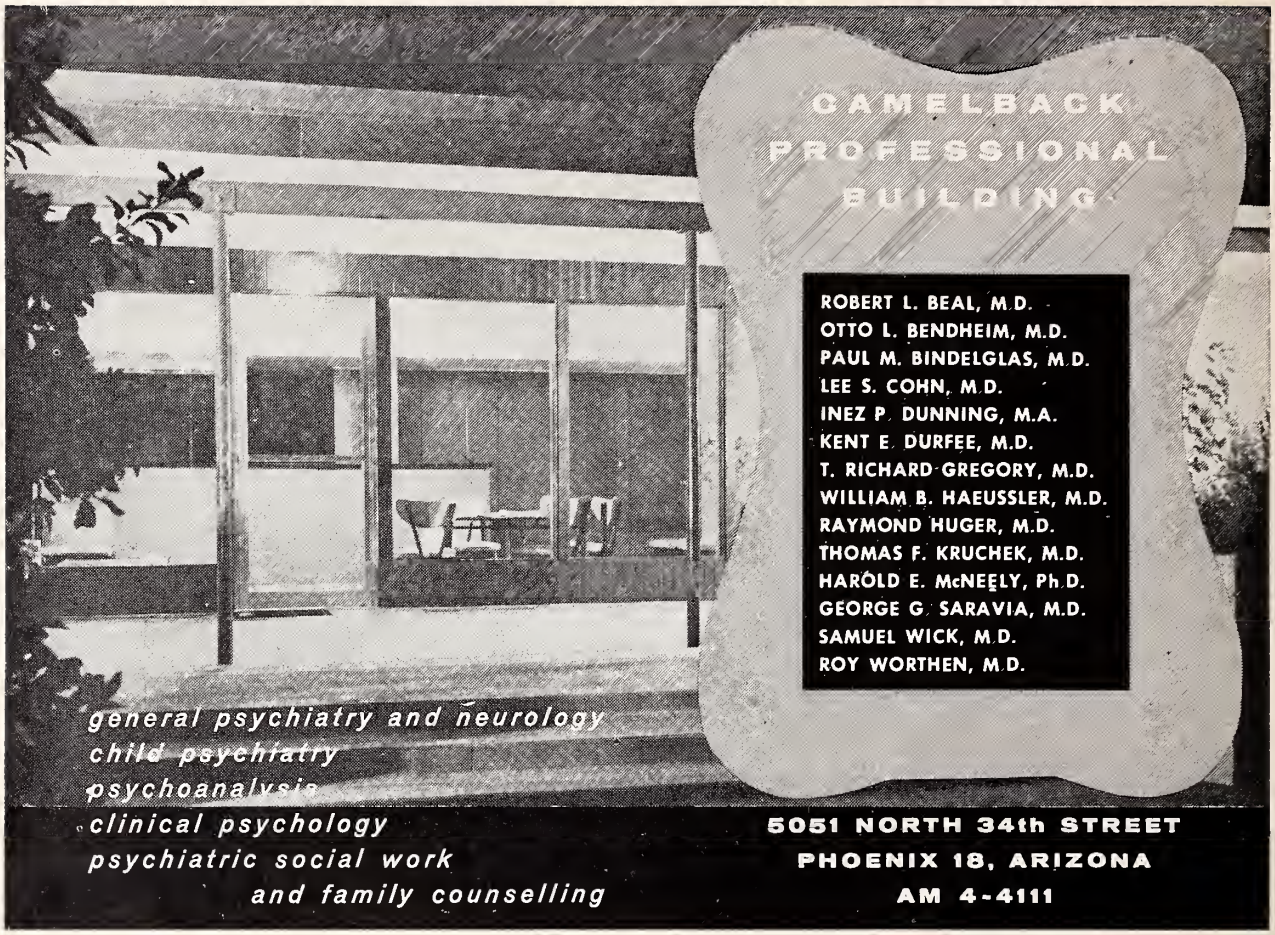
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STATE BOARDS AND STATE MEDICAL ASSOCIATIONS

CARL E. ANDERSON, M.D.*
Santa Rosa, California

It is a strange and interesting anomaly in this era of intensive consumer research, product evaluation and performance testing, that neither the medical schools nor the state boards have any well established method for determining the continuing quality of performance of their only product — the practicing physician. Periodic re-examination and other techniques have received some attention as methods for filling this void, but the problem has not yet been solved.

Boards, after licensing and schools, after graduation, have little or no further contact with their products. On the other hand, the medical associations which band together upward of 80 percent of all licentiates, have a continuing and lifelong close relaionship with the physician. Certainly the state association might be most helpful to the state board in developing continuing studies of patterns of practice including those that might be contrary to the public interest.

It is doubtful that any state association would, on its own, conduct a study of the professional competence of its members. But a well-designed, limited study, instigated by a medical school or state board, planned and conducted jointly with the medical association, could be accepted and might provide valuable information. One might visualize a joint, voluntary pilot project to test acceptability of and performance in re-examination leading perhaps to more widespread use of this as a re-evaluation mechanism.

In California we have recently had the opportunity to conduct a survey which was developed and planned through the cooperative efforts of the state board and the state medical association. This study sought to determine whether or not there was a need for activity by medical associations to help rehabilitate physicians who had been subject to disciplinary action by the board and to evaluate methods by which the state and local associations could have helped prevent the need for disciplinary action. This study was conducted by the Bureau of Research and Planning of our state association.

Some of the results of this study clearly demonstrate areas in which both the association and the board could have done a better job. Questionnaires were sent to 127 physicians guilty of violations during the years 1958-1963. Over one-half replied. In addition to returning the questionnaire, several wrote long informative letters and many provided explanatory comments.

The returns indicate generally that the board acted in a judicious manner and was fair in the sentences imposed. About one-third of the respondents felt that the board failed to consider all the facts. A few stated that the board could have helped them, after imposing the sentence, by a personal frank discussion, advising and counseling the violator about his future conduct and activities. The importance of education and rehabilitation of violators is shown by the fact that over 90 percent of them either continue in, or return to, the practice of medicine.

Eighty-seven percent of respondents belonged to their local and state medical association at the time of disciplinary hearings. Only 12 percent felt their medical societies had been of assistance by providing sympathetic advice and an opportunity to regain status in the profession and in the community. A much larger percentage—nearly one-half—expressed disappointment or frank criticism of their medical associations, feeling that requested and needed advice or assistance was not forthcoming. The following are suggested ways in which the local or state medical associations could have assisted:

1. By providing education *before* violation, to explain the intricacies of the medical practice and narcotics laws.

2. By refraining from imposing their own penalties on the violator after his license had been reinstated.

*Chairman of the Council, California Medical Association. Presentetd at the Annual Meeting, Federation of State Medical Boards of the United States, February 6, 1966, Chicago.

3. By providing a "Rehabilitation Committee" to give advice, understanding and show a desire to help, rather than criticism and rejection.

4. By providing advice and referral to different avenues of employment during the period of probation or suspension of license.

It is recognized that the small size of the sample in this study precludes any final rigid conclusions, but the study certainly indicates some areas in which both the state boards and the medical associations could improve their handling of the problem physician. It also demonstrates that such joint studies can be done and can be valuable.

Another significant area for cooperation between state boards and medical associations relates to the state laws governing medical practice and the discipline of physicians. The rapidly changing patterns of society and of the practice of medicine create a situation in which state laws regulating the behavior of physicians soon become outmoded and require revision to reflect current standards of conduct.

The changing of state laws is a legislative process and is most often stimulated by pressures arising outside the profession. These pressures may emanate from a dissatisfied segment of the public, or of the public press. Alternately, an ambitious or concerned legislator, or a legislative committee, may urge amendments to the Medical Practice Act. All too rarely are the laws rewritten at the request of the profession.

The legislature in any state is busy with many subjects other than the regulation of the medical profession. Medical practice laws conceived and written by a legislative committee in response to pressure from non-professional sources and amid the turmoil of a legislative session, understandably often fail to achieve an ideal result. Some notable examples of this appear in the medical licensure laws of various states. In at least 12 states the laws fail to define "unprofessional conduct." In one state unprofessional conduct is *not* a ground for disciplinary action; in another state it is unprofessional conduct to advertise to treat or cure a disease which is "manifestly incurable"—by implication it is permissible to advertise to treat curable diseases. One state declares it unprofessional conduct to be guilty of "malpractice which results in death." Lesser malpractice is presumably tolerated.

The effect of mental illness as it relates to a physician's license to practice in the various states, presents a most confusing hodgepodge of implications, assumptions and lack of definitions. At least two states have no provision for appeal to the courts by a disciplined practitioner.

The public interest in what is loosely called the "Quality of Medical Care" suggests that the medical practice and licensure laws of many states may soon come under legislative scrutiny. This has already occurred in several jurisdictions. The profession and the state boards would benefit from a professionally oriented intensive study of the existing laws and the development of professionally oriented recommendations for their improvement *before* legislative action.

The boards must adminster the laws. Their task is much easier and they are relieved of the implications of bias and of subjective judgment if the laws are clearly written and the legal authority for board actions is understandably defined.

The state medical associations, representing the vast majority of the governed, also benefit from having a voice in the drafting of laws under which physicians must practice. It is possible, for example, to have proper recognition in the law, of the self-discipline of physicians on the medical staffs of hospitals. It is also possible to have the state laws encourage the cooperation of medical associations and the board in disciplinary matters.

Such desirable objectives are not likely to be reached unless they are planned for in advance. They are not likely to be achieved if the board and the association do their own planning independently of one another. The board and the association, acting in unison constitute a much stronger political force than either one alone.

Ideally, a *continuing* liaison committee, representing the board and the state medical association, would study the laws and their effect upon the public and the profession. Such a committee should periodically bring forth recommendations

for changes in the law which could be accepted by the board and the profession and which would further our avowed purposes in serving the public. We are grateful to the California Board for its splendid support and cooperation with the state association in this field.

Hence it is apparent that there are several areas in which cooperation between state boards and state medical associations could produce significant beneficial results—continuous follow-up of the performance of licentiates; education of the profession concerning legal requirements; assisting in the rehabilitation of violators, and a continuing study to improve and modernize the medical licensure and practice laws. The results to be derived from such cooperation ultimately will accrue to the public. Recognition of this fact should erase the political pressures and suspicions which sometimes alienate the boards from the professional associations, and lead to a fuller appreciation of the problems of each group. The problems, as well as the responsibilities, are complementary, if not identical. They will be resolved best in a spirit of close cooperation and dedication appropriate to responsible members of our great and respected profession.

Arizona Medical Association, Inc.

As you remember, my letter of January 7* quoted the following provision of the proposed Food and Drug Administration regulations regarding physician record-keeping requirements: ". . . [the] maintaining of small supplies of these drugs for dispensing or administering in the course of professional practice in emergency or special situations will not be considered as regularly engaged in dispensing for a fee."

The regulations as finally promulgated on January 27 contained examples of fact situations in which the above provision would apply. Emergency or special situation dispensings include dispensings "as a stopgap measure to tide patients over until a regular supply of drugs can be obtained by prescription from a pharmacy, or dispensing as trial doses to patients . . ." These are, of course, instances in which a physician will not be considered to be regularly dispensing. It should be noted in addition that under the wording of the statute even when a physician does regularly dispense, he need not maintain records unless he, in some way, charges for the drug.

*See March issue

Sincerely yours,
C. Joseph Stetler



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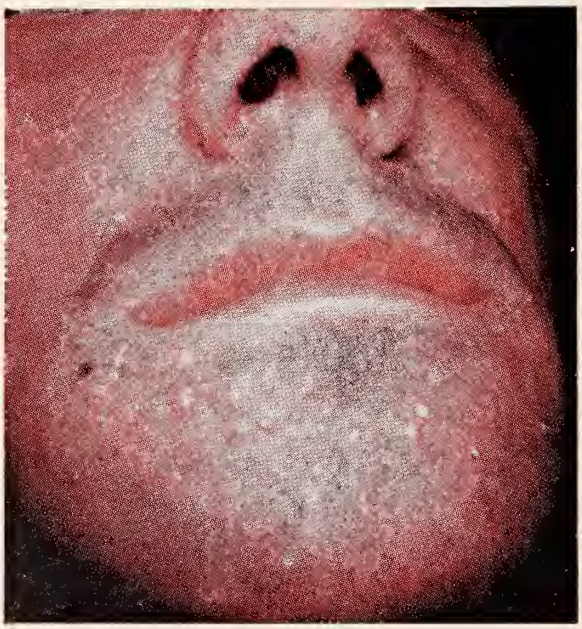
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Squaw Peak Sketches

Of Pithy Pioneer Physicians

by dry gulch jake

ITEM

This physician practiced in Tucson between 1867 and 1892. He was a graduate of Yale College and Heidelberg Medical School. He served in the Confederate Army as a Major and was born in Cassville, Georgia. After the war between the States he settled in California and sold a controlling interest in Catalina Island for $5,000.00 and then moved to Tucson 1 January 1867. He was a member of the fifth, sixth, seventh and ninth Territorial Legislatures and was a Sheriff of Yuma County from 1874 to 1876. He apparently spent a short time over on the river away from Tucson. In 1889 to 1891 he served as a Regent of the University of Arizona.

Francis Henry Goodwin, M.D. 1835-1892

ITEM

This interesting physician was born in London in 1838, went to South Africa, served four years with the British Army; later he raised a company and was elected a Lieutenant. He studied medicine with a Dr. John E. Seaman, an East Indian Physician.

In 1864 he migrated to the United States and finished his education in San Francisco.

In 1865 he founded the town of Eureka, Tintic District, Utah. Here he laid out the streets, built the first house, was appointed the first Postmaster, and was elected the first Justice of Peace and served as a Notary Public. Later he moved back to San Francisco where he practiced until 1878, then he came to Arizona.

Three of his long and interesting letters to the Chicago Tribune repose amongst the Orville Harry Brown papers and were extracted by Dr. W. V. Whitmore. The first, "A Visit to Tombstone City" dated January 5, 1879, gives a very interesting discourse on the early origin of this new mining community, a second letter dealt with his journey into Sonora, Mexico, and a third one deals with his Casa Grande to Tucson trip before the advent of the railroad. One quotation here is pertinent, "Dr. Handy is the oldest resident physician here. An able qualified man speaking Spanish like a Spaniard and he is probably well known throughout Mexico." Dr. Handy as you will recall was the first Chancellor of the University of Arizona. This physician of whom we speak was the first president of the Santa Cruz Medical Society and served many years as secretary later. He served as a County Supervisor, as a Representative to the State Legislature, as a clerk of the District Court, as Court Commissioner for one term, and in 1910 to 1911 served as Mayor of the city of Nogales. He practiced in Arizona for fifty years in Pima County and lived to the youthful age of 92 summers.

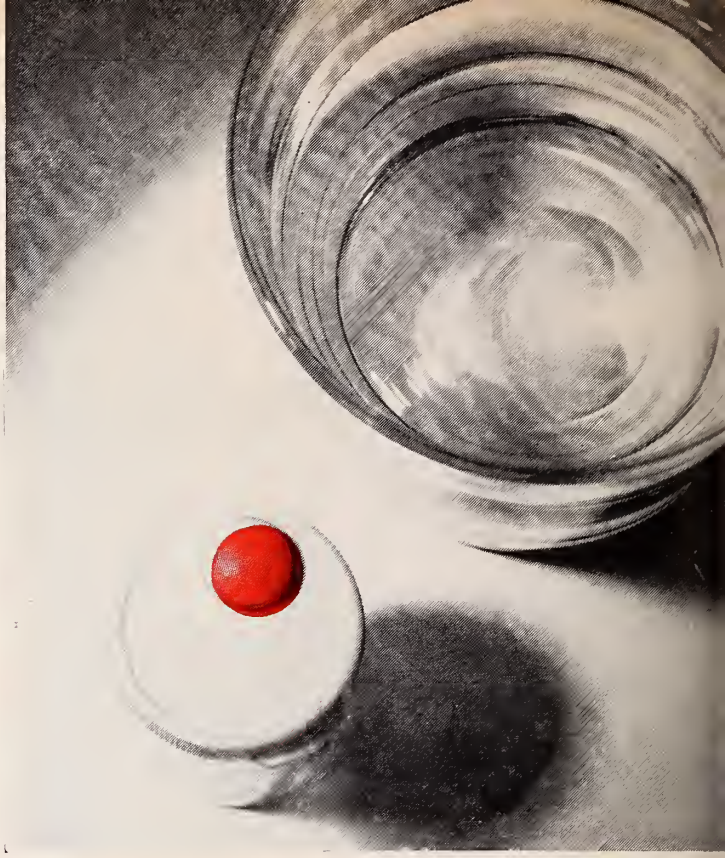
This was Dr. Adolphus Henry Moon, 1838 to 1931.

ITEM

This physician holding Arizona License No. 447 was reported in 1913, "This physician of Maricopa County, a young man of talent and promise, died last night of a pulmonary hemorrhage, following a kick from a gun while hunting." They must have had powerful guns in those days. Dr. Charles Robert Niberg.

John W. Kennedy, M.D.





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Effective in a wide range of everyday infections —respiratory, urinary tract and others—in the young and aged—the acutely or chronically ill—when the offending organisms are tetracycline-sensitive.

Warning — In renal impairment, usual doses may lead to excessive systemic accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of discomfort.

Precautions and Side Effects — Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. Use of demethylchlortetracycline during tooth development (last trimester of pregnancy, neonatal period and early childhood) may cause discoloration of the teeth (yellow-grey-brownish). This effect occurs mostly during long-term use but has also been observed in short treatment courses. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment. Side reactions include glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis and dermatitis. If adverse reaction or idiosyncracy occurs, discontinue medication and institute appropriate therapy. Anaphylactoid reactions have been reported.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products.

Capsules: 150 mg of demethylchlortetracycline HCl.

Tablets: film coated, 300 mg, 150 mg, and 75 mg of demethylchlortetracycline HCl.

LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York

Lederle

674-6—3838

PLEASE PASS THE CIGARETTES

Dermont W. Melick, M.D.

You want my advice about smoking. The papers lead you to become a little hypochondriacal about the chance you run of getting cancer of the lung if you do not stop smoking forthwith. Cessation of smoking by your own rules failed to divest you of the habit. You ask if those filters aren't sure fire protection against the cancer bug getting into your lungs. You say doctors aren't consistent. One tells you tales of horror and damnation and insists complete abstinance is the only solution. The next allows as how moderation is the key to having your cake and eating it too. The third expounds in tones of high derision and ultimate prophecy that smoking and cancer of the lung is hogwash. Forget it. OK, but that damn gremlin keeps crawling around in your cerebral cortex waiting for an answer. You took the matter in your own hands. An elongated cigarette holder. At home in the near proximity of your easy chair you have installed a Turkish bubbler. The penultimate in protection. Good cause for ease of mind and a tranquilizer for the gremlin. Your genius inspired cancer eliminator consists of A — a filter; B — a deluxe elongated trapping tube and C — a cleansing of the smoke in aqua pura. You have it made. Almost. Some unsolicited joker disturbs your equanimity by telling you someone of genius akin to yours is advocating the use of a tobacco filter to filter the tobacco. Your index of confusion rises above the marks on the chart. Be consoled. Someone is simply trying to make you happy and protect you at the same time. A medal to that intellect for an act of humanitarianism above and beyond the call of duty. Your friend the statistician entertains you with music you like to hear. He is a comfort. He is a joy forever. He assures you that the Mayo Miracle Workers are on your side. It is impossible to prove a direct relationship between smoking and cancer of the lung. Statistically that is. How about the 9 to 1 ratio between males and females? Why should the weaker sex be strong enough to resist cancer of the lung? Some of those dolls have been smoking long enough to prove something one way or another. They continue to arrive at the point of no return without having to suffer the indignity of cancer of the lung. A bright thought now ushers the philosophy of the fatalist through the portals of your otherwise confused and somewhat beclouded higher sensorium. Supposing cancer of the lung is caused by smoking. You couldn't care less. You can't stop smoking. And would you if you could? Last week you mournfully trudged down the church aisle to the last rites of one of your best friends. A nonsmoker. He bragged about it. Religiously he avoided the nasty weed. It irked you that he was not susceptible to the seductive charm of the Goddess of Nicotine. At least he was spared the knowledge of the true diagnosis. You guessed it. A crab on the lung. Somehow this all adds up in your favor. Your real hero now makes his appearance on stage. A rumor is rampant that a new product of chopped cabbage leaves is ready for the smoking fraternity. This delectable concoction is guaranteed to smoke like tobacco. If you suffer with anosmia you won't mind the smell. Absolutely and positively one hundred percent free of carcinogenic agents. Your unsolicited joker friend again tosses you a hooker. He says the giants of the tobacco industry are against the promotion of this new kind of weed. Who knows, so early in the game, if maybe cabbage leaves shouldn't be as suspect as any other weed springing fecund from our beneficent terra firma? Nothing but good can eventuate from this adverse opinion of the promulgators of the axiom "smoking tonics the blood like Geritol." Or so you believe at this cataclysmic moment in history.

Regardless of the overall picture and controversy you must face up to this world shaking problem as all responsible men of reason should. You come from good old pioneer American stock. Bravery is an inherited characteristic. Proven as a voluntary passenger on a plane. Or as a pedestrian pigeon among the high canyons of cement. You gird up your loins and manage to maintain your courage to the sticking point. Pause for review, General. You may be too serious about what is good for you, or bad. Hot weather, cold weather, high altitude, low altitude, fatty foods, starchy foods, excess sugar, excess alcohol, overexertion, underexertion, traffic, temper, allergies, earthquakes, revolutions, atom bombs, hydrogen bombs, virulent bacteria, boredom, bellyaches and falling bricks. Why should you complicate this mad encyclopedic merry-go-round with a concern about smoking and cancer of the lung? Stupidity exemplified. You like to smoke. And bygolly you just can't quit. You tried. A gallant effort it was too. You used all of that magnificent will power you exhibit so forcefully to close a big deal. Bravo! To no avail. You admit defeat. The head shrinkers lost a client when you finally saw the error of your ways. Your return to the happy playground of the addicts and worshipers of the Goddess of Nicotine convinces the skeptics that old "Ironpants" is human after all. You are now receiving the message loud and clear. That is with your crystal set turned up to there. Congratulations. By the way — pass the cigarettes, please.

YUMA PHYSICIAN OFF TO VIET-NAM

Paul J. Slosser, M.D., of Yuma, Arizona, left the United States on Friday, April 15, 1966, for a sixty-day period of service with Project Viet-Nam. He departed from Los Angeles with a group of other volunteer physicians.

A pre-departure briefing was held at the International Hotel in Los Angeles on Thursday, April 14th.

FAMILY DOCTORS MOVE TO HAVE PHARMACISTS LABEL DRUG BOTTLES

Family doctors were urged to request pharmacists to label prescription drug containers with name and strength of contents in order to aid ready identification, especially in case of emergency.

The action was taken by the American Academy of General Practice, spokesman for 29,000 family doctors and the nation's second largest medical organization.

Dr. Kowalewski, of Akron, Pa., said that the Academy's action did note that abuses, such as self-medication, drug shopping and others, were possible under the labeling procedure.

"However, we feel that the advantages, especially in emergency situations such as drug poisoning in children, far outweigh the potential drawbacks," he said. "And, we did stipulate 'under normal circumstances' in our action to enable the doctor to control the situation when he knows he has a patient who might be harmed by such knowledge."

CRIPPLED CHILDREN'S SERVICES

On March 19, 1966, Crippled Children's Hospital, Phoenix, was host to the bi-annual professional program of The Arizona Chapter of the Western Orthopedic Association. Orthopedists from both Phoenix and Tucson attended, along with their guests from such out-of-state cities as Albuquerque and Salt Lake City.

An excellent program was presented by Robert L. Reid, M.D., T. J. Martens, M.D., and T. H. Burton, M.D., members of the Crippled Children's Hospital resident staff. Their papers included: Blounts Disease, Genetic Study of Congenital Absence of Radius, Iliopsoas Tendon Transfer at the Hip (Mustard Procedure) and Experiences with Subtalar Extra-articular Arthrodesis.

REIMBURSEMENT UNDER MEDICARE FOR SERVICES OF HOSPITAL-BASED PHYSICIANS

Introduction

The medicare law (P.L. 89-97) establishes two separate health insurance programs for the elderly. One provides hospital insurance protection to nearly all the aged financed largely through social security taxes. The other provides supplementary medical insurance to aged people who enroll and agree to pay $3-per-month premiums, amounts that are matched from Federal general revenues.

Under the law, the services of physicians (except for residents and interns under professionally-approved training programs) furnished to individual patients will be reimbursed under the supplementary medical insurance program. However, some of the services which hospital-based physicians perform are clearly not related to the care of an individual patient. Frequently, the hospital bears the cost of some or all of physicians' services which are not direetly related to patient care. To the extent that the cost of such services are borne by the hospital, reimbursement will be made to the hospital under the hospital insurance program.

This statement explains the principles that will be followed in deciding which of the two programs is responsible for reimbursement for the various services performed by hospital-based physicians. It must be emphasized that these principles deal exclusively with physicians who have a contractual relationship to a hospital — who, typically, are salaried or who receive compensation from the hospital through billing arrangements under which the hospital collects the funds and remits to the physician pursuant to agreement.

Background

Hospitals in the United States have in force a wide variety of arrangements for the compensation of hospital-based physicians. The medicare program does not require change in the substance of these arrangements whether the arrangements call for compensation by way of salary, or of percentage, or in any other manner.

Many hospitals retain physicians on a full-time basis, at least in the fields of pathology and radiology, and in many instances (especially in teaching hospitals) in other fields of medical specialization as well. The functions of these physicians vary widely. In some cases they devote full time to education or administration. Conversely, some are exclusively concerned with patient care. Any one of these physicians may be engaged in a variety of activities including teaching, research, administration, supervision of professional or technical personnel, service on hospital committees, and other hospital-wide activities, as well as direct personal health services to individual patients. Sometimes the hospital's arrangement is made with a group of physicians who assume joint responsibility for discharging agreed-upon duties.

In many cases, a physician contracts with a hospital to provide only his own professional services, the hospital assuming the cost of supporting personnel (who, in this case, are hospital employees) and bearing the expense of furnishing space, supplies, and the like. Sometimes, however, the physician assumes some or all of these costs. In some instances, the arrangement may constitute a concession or lease, the physician employing the supporting personnel and bearing all other expenses, including a payment to the hospital for the use of space.

The compensation to the physician generally is either on a salary basis, a percent of the gross income received from the patients for the particular services (usually a group of related services — all those performed in a radiology department, for example), or a percent of the net income (gross income less related expenses) received from patients, or some modification or combination of these (such as percentage with

a guaranteed minimum). Generally the hospital collect the charges for the services of these physicians and their supporting personnel, acting in some cases in its own right, in some as agent for the physician.

However the billing is handled, it has been the almost universal practice to make a single charge to the patient to cover the professional service of the physician and all other costs associated with it, including the services of the supporting personnel. In order to make payments under medicare, however, it will be necessary where billing is by or through the hospital to distinguish between the medical and surgical services rendered by a physician to a patient, on the one hand, and the hospital services and the other professional services, on the other. This will be necessary because the payments will come from different trust funds, the payments will usually be handled by different intermediaries, and the methods of determining the the two payments will differ materially.

Thus, there will be two sources of payment under medicare for services furnished to medicare beneficiaries whereas, under present practices, there is a single source. The hospital and the physician will be free, however, if they wish, to pool the two payments through assignment from the physician to the hospital and to distribute the proceeds in accordance with their pre-existing arrangement, or in any other way on which they may agree.

The principles of payment which are discussed below have been approved by the Health Insurance Benefits Advisory Council and will be proposed by the Secretary of Health, Education, and Welfare for adoption through regulation. When the Department of Health, Education, and Welfare acts to establish the necessary regulations, the official Notice of Proposed Rule-Making and the opportunity for submission of data, comments, and arguments relating to the proposed regulations will be provided in accordance with the regular procedure of publication in the Federal Register.

Discussion of Principles of Payment under Medicare for Services of Hospital-Based Physicians

Principle

1. It is not the function of the health insurance programs to determine the arrangement which a hospital and a hospital-based physician may enter into for the compensation of the physician.

Discussion

The Government will not specify or influence the provisions of the contract or arrangement between hospitals and hospital-based physicians. The hospital and physician can continue to negotiate all aspects of their arrangement to their mutual satisfaction.

Principle

2. Whatever the arrangement may be between hospital and physician, the law requires that medical and surgical services rendered to a covered individual by a hospital-based physician be reimbursed only under the supplementary medical insurance program. The costs to a hospital for services furnished in a hospital by a physician which are not professional services to a patient will be included in the reasonable cost reimbursement under the hospital insurance program.

Discussion

The law specifically excludes from hospital cost reimbursement the cost of medical or surgical services provided by a physician, resident, or intern except for those services rendered by interns or residents in approved teaching programs. Physicians' services, as defined in the law, mean "professional services performed by physicians, including surgery, consultation, and home, office, and institutional calls . . ." and are covered under the medical insurance program. In the context of Part B, the term "professional services" is synonymous with the term "medical or surgical services," which defines the exclusion from coverage under the hospital insurance program. Therefore, compensation paid by the hospital to the hospital-based physician cannot be included in hospital reimbursable cost to the extent that it represents compensation for services covered under the medical insurance program.

Principle

3. A professional service rendered by a physician to a patient that can be reimbursed only under the medical insurance program means an identifiable service requiring performance by a physician in person, which contributes to the diagnosis of the condition of the patient with respect to whom the charge under

the medical insurance program is to be recognized, or contributes to the treatment of such patient.

Discussion

All or most of the services typically rendered by hospital-based physicians are professional in character in the sense that they call upon the professional expertise of the physician. Many of these services redound to the benefit of the entire patient population in the hospital by improving the quality of the hospital and medical care rendered in the institution. As used in the law, the term "professional services" — the charges which are reimbursable under the medical insurance program — applies only to services to individual patients of such nature as to justify a professional charge to each patient served. This is necessarily true because the purpose of the medical insurance program is to reimburse the patient in part for expenses incurred by him. Thus, the medical insurance program has no concern with services not properly chargeable to the individual patient.

The argument has been advanced that the professional supervision of a hospital department by a physician infuses a "professional component" into every procedure performed in the department, and that this is true even in the cases where the procedures are performed wholly by supporting technicians and the physician takes no part in them. Without derogating from the importance of such professional supervision, or the responsibility inherent in it, there is no sound basis for a charge to the patient cognizable under the medical insurance program in such cases. The cost of the work of the technicians who alone performed the procedure, and all incidental costs directly involved in its performance, will have been paid by the Government to the hospital on the patient's behalf. The patient could successfully contend that he owes nothing in addition — that he owes nothing to a physician who has himself done nothing that is personally attributable to the patient's presence in the hospital.

It should be noted that a contrary result would open a host of possibilities for professional charges in situations in which charges have not traditionally been made. Thus, a physician or group of physicians assigned to supervise the hospital pharmacy might make a claim for a charge to the patient with respect to every prescription that is filled.

Personal participation of the physician, it is true, will in some situations be difficult to define or may be arguable in fact. The intermediaries will have to assume responsibility for determining that the participation is actual and not a mere subterfuge.

Principle

4. For purposes of reimbursement, the Government will respect, within reasonable limits, an agreement between a hospital and a physician concerning the portion of the physician's compensation which is to be attributed to the care of individual patients and the portion which is to be attributed to service to the institution. If they fail to agree, or if their agreement appears unreasonable, it will be the function of the fiscal intermediary handling payments under the hospital insurance program and the carriers handling payments under the medical insurance program to resolve the issue — by negotiation if possible, otherwise by time studies or other suitable methods. The amount attributed to the care of patients will, to the extent of services rendered to medical insurance beneficiaries, be recognized as proper charges to such patients, reimbursable under the medical insurance program. The amount attributed to service to the institution will be recognized as a hospital cost under the hospital insurance program.

Discussion

Typically, contracts between hospital-based physicians and hospitals provide for the payment of an aggregate amount (in the form of a salary, a percentage arrangement, or on some other basis) to the physician for all of his services within the institution without a service-by-service itemization. The most natural assumption, perhaps, is that the compensation is paid him for all of his services in proportion to the time he devotes to each. But this is not necessarily true. Members of the medical staff who receive no compensation from or through the hospital commonly contribute much time, without charge, to teaching and to service on medical staff committees, and there is no inherent reason that a hospital-compensated physician may not do likewise. The parties to the contract are in the best position to know for what services the compensation is being paid, and their

determination will not be questioned unless it should appear to be designed to accomplish an improper result.

Where the physician is on salary and normally spends full time in administration of departmental affairs, the full salary may be charged to the hospital insurance program. The entire compensation of a physician who renders an appreciable volume of personal patient care, on the other hand, cannot be attributable to institutional services, since the law requires that "medical or surgical services" must be excluded in determining hospital costs under the hospital insurance program. Even in a charity hospital in which professional, as well as other, services are traditionally rendered without charge, any such allocation of the physicians' compensation by the hospital and its physicians would very likely be rejected.

A more difficult case will be that of a determination by a hospital and a physician that the whole of his compensation is attributable to patient care, despite the fact that he devotes a substantial part of his time, not only to teaching and committee work, but also to institutional activities which ordinarily find no counterpart in the activities of uncompensated members of the medical staff; such as general administrative activities, professional supervision of a hospital department, or in the case of pathologists, the performance of autopsies. Such a determination would amount to an agreement that, in return for the privilege of practicing in the hospital, the physician will perform these institutional services without charge. On the face of it, such an agreement may not be unreasonable under some circumstances. An arrangement of this kind may be questioned where the physician devotes a relatively small portion of his time to personal care of patients.

Principle

5. Once the portion of a physician's compensation attributable to professional services to medical insurance beneficiaries has been determined, a schedule of charges can be developed. To be deemed reasonable, the charges should be designed to yield him in the aggregate, as nearly as may be possible, an amount equal to such portion of his compensation. As among the patients to be charged (identified in accordance with Principle No. 3), the allocation of charges may be based on a schedule of relative values, on a uniform percentage of the charges made by the hospital or the physician to other patients for both professional and supporting components of the services, or on another method approved by the carrier as equitable.

Discussion

Since the present almost universal practice does not separate the professional services from the other components of physicians' services for purposes of billing, it is necessary to devise a method for making this determination. The approach set forth in this principle starts with the assumption that the present level of compensation of hospital-based physicians is reasonable. The assumption, of course, is open to challenge in any give case, and the carriers must deal with such challenges on the basis of prevailing rates of compensation in comparable institutions. Over a period of time the schedules of charges will be subject to revision in the light of changes in the prevailing levels of compensation.

The method of determining charges which is outlined in this principle appears to meet, better than any other, the objectives of permitting a workable flexibility, and at the same time of keeping charges within reasonable limits so as to avoid escalation of total costs to the patients and the Government. It presents certain difficulties, however, and a process of trial and error may be necessary.

In the first place, this method (at least to the extent that relative value scales are utilized) imposes a difficult task on the physicians in proposing and on the carriers in reviewing schedules of charges calculated to achieve the desired result. A process of trial and error may often be unavoidable, but adjustments found necessary in the schedules should ordinarily be applied prospectively only.

In the second place, this method will result in widely differing charges for the same service in different, even neighboring, institutions. Such variation is by no means unprecedented, and in view of the widely differing volume of services rendered in large and small hospitals, appears inevitable if the insurance system is not to contribute to inordinately high compensation in some institutions or inordinately low compensation in others.

Finally, permission to use a flat percentage

of the standard charges to measure the value of the professional component may be inequitable as among the patients, in view of wide differences in the measure of the physician's participation in relation to the total procedure. This inequity could be somewhat lessened by applying different percentages to classes of procedures — e.g., to radiotherapy and diagnostic radiology. In any event, permission to use such percentages has a strong practical appeal, and in view of the imprecise criteria that have long governed the fixing of charges for these services, we believe that it will not seriously aggravate inequities as between the patients.

Principle

6. Where a hospital-based physician himself bears some or all of the costs of operation of a hospital department *and* bills his patients directly rather than through the hospital, the reasonable charges for his services recognized under the medical insurance program will reflect the costs so borne by him. Where all of the costs are to be borne by the physician, charges heretofore established for such services by agreement between the physician and the hospital may be acceptable as reasonable charges for purposes of the medical insurance program, but they will require adjustment either upward or downward if the hospital has been bearing a cost significantly greater or less than its share of the proceeds of such charges.

Discussion

Where billing for in-hospital services of physicians is by or through the hospital, the supporting component of the services must be paid for under the hospital insurance program, even though the physician bears some or all of such costs under a concession or lease or other arrangement. In such a case, the hospital will be expected to make an appropriate payment to the physician on account of the costs borne by him. Where the physician bills the patients directly, on the other hand, only those costs incurred by the hospital are reimbursable under the hospital insurance program; the physician is to reflect in his charges the costs borne by him.

The objective in determining reasonable charges where the physician bills patients directly is the same as that expressed in Principle No. 5; to bring about as little change as possible (in the normal case) in the compensation the physician receives for his professional services in the hospital.

Where a hospital has been receiving, as its portion of the receipts for such services, significantly more or less than the costs the hospital has incurred in the provision of the services, there appears to be no reason that this excess or shortage should be transferred from the hospital to the physician merely because he decides to bill his patients directly. Since hospital charges for other services must presumably be adjusted to reflect the elimination of this net expense or net income, transfer of this item to the physician (whether the item is plus or minus) would alter the total cost of patient care — a result which the legislation was not intended to bring about.

Since physicians' charges generally are to be judged on the basis of prevailing practices in the community, it may be argued that the charges of a hospital-based physician who elects to bill his patients directly should be measured by the charges of non-hospital laboratories, clinics, and the like for similar services. The situations, however, are frequently not comparable because of the large volume, and consequent low unit cost, of a laboratory that performs all of the services required in a hospital. Although charges prevailing in non-hospital laboratories are to be taken into account, they will not be guides for determining reasonable charges in situations where they would produce an unreasonable result.

Also, tangentially related to the issue of billing for in-hospital services of physicians is the question of billing for diagnostic or therapeutic items or services furnished not directly by the hospital, but under arrangements made by the hospital with outside laboratories for such items or services. Many hospitals, especially smaller hospitals, do not maintain full laboratory facilities. Such institutions frequently enter into arrangements with independent laboratories for the performance of diagnostic procedures, as, for example, in the field of pathology. In such instances, typically, the laboratory bills the hospital for the services performed, and the hospital, under present practices, bills the patient. It would appear that services performed under such an arrangement would be included as inpatient hospital services, and the cost thereof would be reimbursable under the hospital insurance program.

Principle

7. Hospitals and hospital-based physicians will be required to keep records and be prepared to furnish information which can substantiate the agreements they enter into with respect to the allocation of the compensation of the physicians.

Discussion

Where the agreement between the hospital and the physician allocates the physician's compensation between services covered under the hospital insurance program and those covered under the medical insurance program, it will generally be accepted if the parties concerned furnish a rationale for the allocation. Subject to the recognition that certain institutional services may be rendered without compensation or as a return for the privilege of hospital practice (see discussion of Principle No. 4), such allocation should be capable of substantiation by the hospital and the physician. Copies of the rationale will, if a question is raised, be submitted to both the hospital insurance and the medical insurance intermediaries. If either intermediary believes that the rationale does not justify the allocation, it will notify the other intermediary so that coordinated action, if necessary, can be undertaken.

Under these principles, it is recognized that a physician who serves two or more hospitals may under his agreements have significantly different allocations and consequently significantly different charges for the same service in the different hospitals served by him.

Principle

8. Nothing in the foregoing principles restricts the right of the physician (in the absence of his acceptance of an assignment by the patient) to determine the amount of his charge to the patient for his services, or restricts the hospital and the physician in providing for such disposition of the payments received from the Government and the beneficiaries under the program as they may agree upon. The total costs of services to inpatients and outpatients prior to the inauguration of this program should not be increased solely by reason of the requirement for division of payments for such services between the hospital insurance program and the medical insurance program.

INTEREST GROWS IN MED SCHOOL

Dr. Merlin K. DuVal, Dean of the University of Arizona's College of Medicine states that letters of inquiry concerning the medical school have reached a count of 546.

The letters date back to 1964, he said.

"It is very rewarding to learn that this high level of interest in Arizona's medical school exists," DuVal said. "Naturally, we are also pleased that this interest apparently goes beyond Arizona.

Of the total letters received, 473 have been from out of state. Included have been inquiries from Belgium, England, Greece, India and the Philippines, he said.

Arizona's three schools of higher education have 764 pre-medical students. Of these, 116 are presently juniors and could be potential applicants to the UA College of Medicine when its first class is admitted in the fall of 1967.

DuVal said formal applications for admission will be accepted after July 1, 1966, and will be accepted through Feb. 1, 1967. The latter date was approximate, he said.

"Although the new basic sciences building is being constructed to accommodate 64 students in each of the four classes," DuVal explained, "we will probably hold the classes to 32 students for the first year or two."

YUMA DOCTORS ARE HONORED BY TREE PLANTING

Thirty-two Yuma County physicians and four other outstanding citizens are being honored with the dedication of a mulberry tree for each at the Yuma County Fair Grounds.

The trees, donated by Dr. A. J. Ochsner, are being planted by the Sun and Sand Garden Club, which is working in conjunction with the Chamber Maids Green-Up campaign.

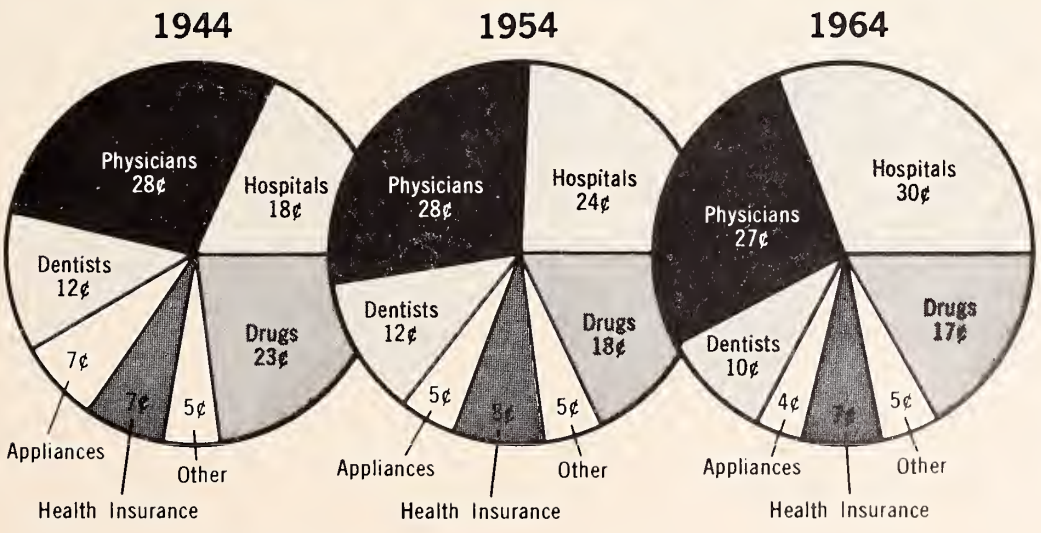
The physicians to be honored include:

W. D. Anderson, John Arnold, Robert B. Bailey, Ellis V. Browning, H. D. Bryan, C. D. Buster, William C. Cain, Martin Cohen, Harold N. Gordon, Ralph T. Irwin, Franklyn Johns and Nathan D. Kline.

Also William H. Lyle, Charles G. Matheus, Robert M. Matts, Charles R. McReynolds, Henry R. Meyer, William R. Morgan, William A. Phillips, Joseph C. Pinto, A. I. Podolsky, Charles S. Powell, Edward Putnam, Robert Rider and Paul J. Slosser.

Also John J. Stanley, Robert A. Stratton, Walter S. Viard, James Volpe, Jr., Dale Webb, G. Calvin Williamson and Matthew L. Wong.

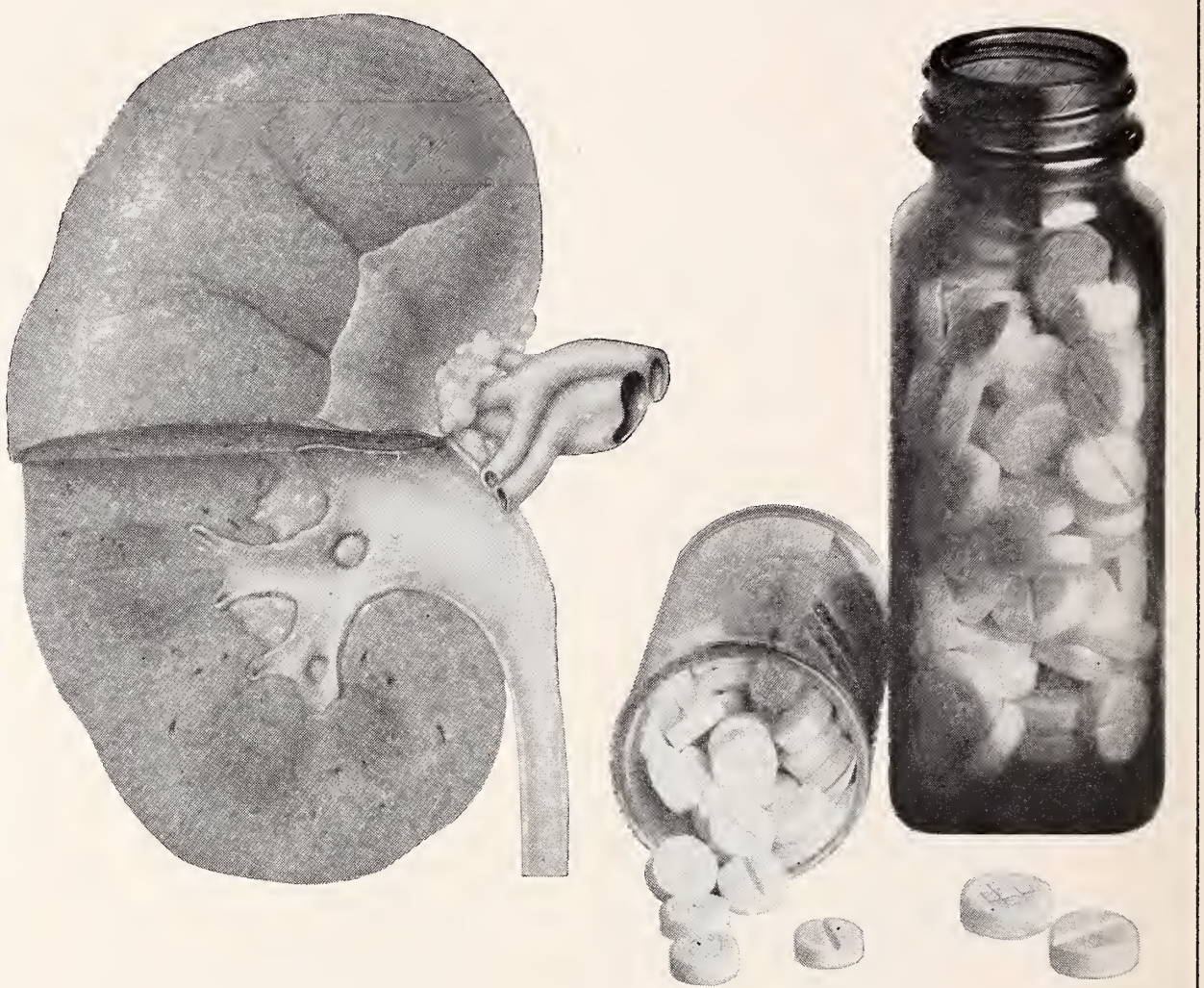
DISTRIBUTION OF THE HEALTH CARE DOLLAR FOR YEARS 1964, 1954, AND 1944



SOURCE: SURVEY OF CURRENT BUSINESS, November 1965, Vol. 45, No. 11 U. S. Department of Commerce, Office of Business Economics, pp. 20-23. (Calculations by Department of Economics, AMA)

—AMA News Graphichart

at Merck Sharp & Dohme...



understanding... precedes development

The development of chlorothiazide and probenecid were events of major importance, but perhaps even more important for the future was the Renal Research Program by which they were developed. When Merck Sharp & Dohme organized this program in 1943, it was expressing in action some of its basic beliefs about research:

• Many problems connected with renal structure and function were still undefined or unsolved. The Renal Research Program would begin its basic research in some of these problem areas.

• From knowledge thus acquired might come clues to the development of new therapeutic agents of significant value to the physician.

For example, the Renal Research Program put fifteen years into this search before chlorothiazide became available. But because these years had first led to a greater understanding of basic problems, the desired criteria for chlorothiazide existed before the drug was developed.

Along with other research teams at Merck Sharp & Dohme, the Renal Research Program continues to add new understanding of basic problems—understanding which will lead to important new therapeutic agents.

MSD MERCK SHARP & DOHME Division of Merck & Co., Inc., West Point, Pa.

where today's theory is tomorrow's therapy



FUTURE MEDICAL MEETINGS

ARIZONA ACADEMY OF GENERAL PRACTICE
1966 Interim Meeting

May 25, 26, 27, 1966

GRAND CANYON VILLAGE
ARIZONA

SPEAKERS AND TOPICS:

"Population Dynamics and Family Planning" — William J. Moore, M.D., Phoenix. "The Conservative Treatment of Uremia" — Jerry P. Pendras, M.D., Seattle.

"Psycho-social Complications in Patients on Hemodialysis" — Allan Enelow, M.D., Los Angeles.

"Management of Infants with Pierre-Robin Syndrome" — Daniel B. Carroll, M.D., Phoenix.

"The Shocking News About Shock" — Philip Thorek, M.D., Chicago.

Two breakfast panel discussions:

May 26th — 7:30 A.M. "Medicare"

May 27th — 7:30 A.M. "Treatment of Chronic Uremia"

FOR FURTHER INFORMATION WRITE:

Arizona Academy of General Practice
P.O. Box 441
Scottsdale, Arizona 85252

20th ANNUAL ROCKY MOUNTAIN CANCER CONFERENCE

July 15-16, 1966

BROWN PALACE HOTEL
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GREENLEE: Gerhard L. Ihm, M.D., President, Phelps Dodge Hospital, Morenci; James W. Gilbert, M.D., Secretary, P. O. Box 1537, Clifton.

MARICOPA: Ray Fife, M.D., President, 2620 N. 3rd Street, Phoenix; Charles H. Finney, M.D., Secretary, 555 W. Catalina Dr., Phoenix.
(Society Office — 2025 North Central Avenue, Phoenix)

MOHAVE: John G. Lingenfelter, M.D., President, 412 E. Oak Street, Kingman; John J. Standifer, M.D., Secretary, 412 E. Oak Street, Kingman.

NAVAJO: Claude H. Peterson, M.D., President, 1500 Williamson Ave., Winslow; Leo L. Lewis, M.D., Secretary, Santa Fe Medical Offices, P. O. Box 673, Winslow.

PIMA: Juan E. Fonseca, M.D., President, 601 N. Wilmont Rd., Tucson; Elliott E. Stearns, Jr., M.D., Secretary, 2442 E. Elm St., Tucson.
(Society Office — 2555 East Adams Street, Tucson)

PINAL: Chalmers D. Johnson, M.D., President, 1195 N. Arizona Blvd., Coolidge; Richard F. Adamson, M.D., Secretary, Florence Medical Center, Florence.

SANTA CRUZ: Henri S. Denninger, M.D., President, P. O. Box 37, Tumacacori; Charles S. Smith, M.D., Secretary, Gebler Building, Nogales.

YAVAPAI: Dennis R. Semkin, M.D., President, 533 W. Gurley Street, Prescott; William R. Shepard, M.D., Secretary, 1003 Division Street, Prescott.

YUMA: James Volpe, Jr., M.D., President, P. O. Box 1151, Harold N. Gordon, M.D., Secretary, 1832 8th Avenue, Yuma.
(Society Address — P. O. Box 4370, Kofa Substation, Yuma)

WOMAN'S AUXILIARY TO THE ARIZONA MEDICAL ASSOCIATION — 1966-67

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2019 North Crescent Drive, Flagstaff, Arizona

President-Elect Mrs. Elvie B. Jolley (Mila)
Box 919, Bisbee, Arizona

1st Vice President Mrs. Richard Hardenbrook (Kaaren)
316 Grove Avenue, Prescott, Arizona

2nd Vice President Mrs. Charles Matheus (Marilyn)
2148 East 25th Street, Yuma, Arizona

Secretary Mrs. Richard Timmons (Evelyn)
5302 N. 69th Place, Scottsdale, Arizona

Treasurer Mrs. James Parsons (Carolyn)
5251 E. Hawthorne Pl., Tucson, Arizona

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700 East 10th Street, Casa Grande

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Executive Secretary for Mexico Mr. Alfredo E. Patron
Mazatlan, Sinaloa, Mexico

ACTIONS OF THE HOUSE OF DELEGATES IN MEETING APRIL 30, 1966

RESOLUTION 1

Introduced by Maricopa County Delegation

Subject: Internists, General Practitioners, Surgeons and Others — Usual and Customary Fees Associate with Existing Blue Shield Schedules

WHEREAS, the existing Blue Shield Benefit Schedules do not always reflect the usual and customary fees paid to the physicians of the State; and

WHEREAS, recent studies by Blue Shield show inequities in payments under some policies of Internists, General Practitioners, Surgeons and others; and

WHEREAS, in the future programs in third party and government financed plans, payment will probably be based on a percentage of the usual and customary fees; therefore be it

RESOLVED, that steps be taken to correct these inequities with the desired goal of having all physicians paid the same percentage of their usual and customary fees; and be it further

RESOLVED, that the House of Delegates recommend to the Arizona Blue Shield that its Professional Committee take steps to correct these apparent inequities.

Adopted, as amended, April 30, 1966.

RESOLUTION 2

Introduced by Board of Directors, The Arizona Medical Association, Inc.

Subject: Revoking Resolution No. 10, Adopted May 1, 1965, Regarding Medicare, P. L. 89-97

WHEREAS, The House of Delegates of The Arizona Medical Association, Inc. on May 1, 1965, adopted Resolution 10 with respect to H.R. 6675 (which has since become Public Law #89-97 enacted by the 89th Congress on July 30, 1965, commonly referenced as "Medicare"); and

WHEREAS, after the passage of the said Resolution 10 but prior to putting such Resolution into effect or taking any action thereunder, The Arizona Medical Association, Inc. was advised that activation of the said Resolution might possibly be construed as placing The Arizona Medical Association, Inc. or its individual member physicians in jeopardy under the anti-trust laws of the United States by possibly causing individual non-participation individually arrived at to be misconstrued as group non-participation; and

WHEREAS, this advice resulted in a resolution of the Board of Directors of The Arizona Medical Association, Inc., adopted September 19, 1965, which reads as follows:

"That the Board of Directors of The Arizona Medical Association, Inc., recommend to the House of Delegates that at its next meeting it rescind Resolution 10 and substitute in its place a resolution that will make it clear that The Arizona Medical Association takes no stand whatever on the subject of 'Non-Participation' under Medicare, and which resolution will be designed to give the greatest possible freedom, consistent with safety to the Arizona Medical Association, for each individual doctor to decide for himself what his activities will and will not be with respect to the Medicare legislation and the attendant rules."; and

WHEREAS, pursuant to the September 19, 1965, resolution of the Board of Directors of The Arizona Medical Association, Inc., and the recognition of the fact that it never was the intention of The Arizona Medical Association, Inc., or its House of Delegates to pass any resolution the activation of which might be construed to be a violation of any of the laws of the United States or to put the Association or any of its members in jeopardy; therefore be it

RESOLVED, that the House of Delegates of The Arizona Medical Association, Inc. in its regular Session assembled in Scottsdale, Arizona, this 30th day of April, 1966, specifically revokes in its entirety Resolution Number 10 adopted May 1, 1965; and be it further

RESOLVED, that The Arizona Medical Association, Inc. takes no stand or position whatever on the the subject of non-participation under the Medicare Act or any of its attendant rules, but, instead, leaves all decisions on this subject to each individual member physician as his conscience shall dictate; and be it further

RESOLVED, that this Resolution be given the widest possible circulation among the membership of The Arizona Medical Association, Inc. so that each member shall be advised thereof.

Adopted, April 30, 1966.

RESOLUTION 3

Introduced by Board of Directors, The Arizona Medical Association, Inc.

Subject: 1967 Calendar Year Budget of Income and Expenditures

WHEREAS, it is customary for the House of Delegates to approve the Budget of Income and Expenditures for the next succeeding calendar year of The Arizona Medical Association, Inc.; therefore be it

RESOLVED, That the following Budget of Income and Expenditures for the calendar year 1967, be adopted as follows:

INCOME:

400	**GENERAL FUND**		$142,408.00
401	Association Dues — Active Members	$135,000.00	
401a	Association Dues — Service Members	1,300.00	
402	Sale of Supplies	50.00	
403	AMA Commissions	608.00	
404	Interest — Savings Acounts	5,400.00	
405	Miscellaneous	50.00	
420	**PUBLISHING COMMITTEE**		$ 36,000.00
421	Advertising	25,300.00	
422	Subscriptions Non-Members	340.00	
423	Reprints and Engravings	3,600.00	
424	Other	10.00	
425	Subscriptions, Members	6,750.00	
430	**ANNUAL MEETING**		$ 16,750.00
431	Exhibitors	7,000.00	
432	Registration Fees	6,000.00	
433	Dinner Dance	1,500.00	
434	Other	300.00	
435	Donations	1,500.00	
436	Specialty Society Speaker Fees	450.00	
440	**BENEVOLENT AND LOAN FUND**		$ 2,500.00
442	Interest on Principal — Trust #4714	300.00	
443	Interest on Loans — Trust #3068	2,000.00	
444	Other — B&L Savings Account Interest	200.00	
445	Contributions	-0-	
450	**TERRITORIAL MEDICINE**		$ -0-
451	Miscellaneous	$ -0-	
	Total Anticipated 1967 Income		$197,658.00

EXPENDITURES:

500	**GENERAL FUND**		
501	Salaries	$57,000.00	
502	Payroll Taxes	3,100.00	
503	Meeting Expense	4,000.00	
504	Travel Expense	7,500.00	
505	Rent	6,864.00	
506	Telephone, Telegraph & TWX	1,800.00	
507	Mimeographing	800.00	
509	Supplies	4,500.00	
511	Dues & Contributions	1,300.00	
512	Legal	10,000.00	
513	Insurance	6,000.00	
514	Equipment Maintenance	900.00	
515	Printing	800.00	
516	Postage	3,000.00	
517	Miscellaneous	200.00	
518	Blue Cross/Blue Shield	2,000.00	
520	Contractual Services	500.00	
521	Audit	900.00	
522	General Overhead Recovery	(3,800.00)	
524	Furniture and Fixtures	1,000.00	
600	Depreciation Expense	1,200.00	
	Total General Fund Expenditures		$109,564.00
	COMMITTEES		
500a	Annual Meeting	16,750.00	
500b	Articles of Incorporation	50.00	
500c	Benevolent and Loan Fund		
	Meeting Expense	100.00	
	Scholarship Grants	6,000.00	
500d	Board of Directors	1,200.00	
500e	Central Office Advisory	150.00	
500f	Executive	100.00	
500h	Grievance	100.00	
500i	History and Obituaries	100.00	
500j	Industrial Relations	25.00	
500k	Legislative	600.00	
500l	Medical Economics	100.00	
500p	Professional	3,000.00	
500r	Public Relations	10,000.00	
500s	Publishing	36,000.00	
500t	Scientific Assembly	200.00	
500u	Woman's Auxiliary	1,000.00	
500w	Procurement and Assignment	10.00	
500x	Territorial Medicine Publication	-0-	
	Total Committee Expenditures		$ 75,485.00
	Total Expenditures Anticipated for 1967		$185,049.00
	Anticipated Contingency Fund		$ 12,609.00;

and be it further

RESOLVED, that the Annual Dues of The Arizona Medical Association, Inc., be continued at $100.00 for active members; and $5.00 for subscription to Arizona Medicine Journal; totaling $105.00.

Adopted, April 30, 1966.

RESOLUTION 4, 5 & 7

Introduced by John W. Kennedy, M.D.; Delegate, Maricopa County Medical Society; John A. Wilson, M.D.; and John W. Kennedy, M.D., Delegate, Maricopa County; respectively.

Subject: Hospital-Based Medical Specialists

WHEREAS, the House of Delegates of the American Medical Association recently adopted the following statement of policy:

" 'Hospital-based' medical specialists are engaged in the practice of medicine. The fees for the services of such specialists should not be merged with hospital charges. The charges for the services of such specialists should be established, billed, and collected by the medical specialist in the same manner as are the fees of other physicians"; and

WHEREAS, Public Law 89-97, the Medicare Program, provides for just such an arrangement on the part of the hospital-based specialists; and

WHEREAS, it appears desirable that payment of all fees of hospital-based specialists be handled in a uniform manner; therefore be it

RESOLVED, that the Arizona Medical Association endorses and supports the policy that all hospital-based medical specialists shall sepa-

rate their professional fees from hospital charges and present their own bills to all patients; and be it further

RESOLVED, that the hospital-based medical specialists set their fees according to the worth of their professional services, maintaining a zealous guard against abuses which would significantly increase the cost of medical care.

Adopted, as Substitute Resolution, April 30, 1966.

RESOLUTION 6

Introduced by Maricopa County Medical Society

Subject: Revision of Therapeutic Abortion Law

WHEREAS, the problem of criminal abortion in the United States is of tremendous magnitude, with several studies suggesting that one of every five pregnancies terminates in illegal abortion, for a total of more than one million per year and possibly resulting in more than 500 deaths; and

WHEREAS, illegal abortion is one of the largest single causes of maternal death in the country; and

WHEREAS, while maternal deaths from other causes have declined almost 30% from 1950 to 1960, the death rate from abortion has remained the same and the absolute recorded number of abortion deaths has doubled; and

WHEREAS, needless suffering and death result from the drastic restrictions placed on therapeutic abortions by the laws of most American states and these laws are considered as strongly contributory to the criminal abortion problem; and

WHEREAS, under the Arizona statutes a physician cannot with impunity exercise his medical judgment to recommend a therapeutic abortion even if the pregnancy presents grave danger to the woman's health; nor can an abortion be performed legally to prevent the birth of a hopelessly demaged product of conception; nor to provide relief to a victim of the crimes of rape or incest; and

WHEREAS, abortions for maternal health, fetal risk, rape and incest are already recommended by the medical profession, and indeed performed for these reasons in reputable hospitals, even though, strictly speaking, they are illegal according to the present archaic laws; and

WHEREAS, until the law recognizes the right of maternal health, not alone life, and also the right of the infant to be wellborn, there will be continued jeopardy to valuable reproductive potential of mothers and condemnation of hopelessly damaged children to lifetime institutional care; therefore be it

RESOLVED, that the Arizona Medical Association sponsor and support the introduction to the State Legislature of the following amendment to the present therapeutic abortion laws:

1. Therapeutic abortion may be performed in a licensed hospital by a duly licensed physician, on approval of a therapeutic abortion committee of the hospital, for those patients who seek it when:
 (a) There is substantial risk that continuance of the pregnancy would gravely impair the physical or mental health of the mother;
 (b) There is substantial risk that the child would be born with grave physical or mental defect; or
 (c) The pregnancy resulted from rape or incest;
2. Approval of the abortion must be given in a licensed hospital by a therapeutic abortion committee consisting of a least three physicians. Reports by such committees must be submitted to the State Department of Health;
3. In cases of rape or incest, information must be obtained from the District Attorney to the therapeutic abortion committee of the hospital that there is probable cause to believe that the alleged violation occurred, such information not to be evidence in any other proceeding.

Adopted, as amended, April 30, 1966.

RESOLUTION 8

Introduced by John W. Kennedy, M.D., Delegate Maricopa County

Subject: Blue Shield Organization

WHEREAS, the principal concern of Blue Cross is to provide insurance to cover the cost of hospital care, while the principal concern of Blue Shield is to provide insurance to cover the cost of medical and surgical care; and

WHEREAS, to perform these separate functions there are two separate corporations with separate boards of directors and separate officers; and

WHEREAS, in order to assure that each corporation be best able to perform its function of rendering maximum service to its policyholders, it is desirable that each corporation have its own Executive Director; therefore be it

RESOLVED, that the House of Delegates of The Arizona Medical Association, Inc., in its regular session assembled in Scottsdale, Arizona, this 30th day of April 1966, recommends to the Board of Directors of Blue Cross and to the Board of Directors of Blue Shield that each corporation have its own Executive Director.

Not adopted, April 30, 1966.

Adopted Recommendation of Reference Committee on Resolutions, April 30, 1966, as follows:

"That the Board of Directors request a task force from the national Blue Shield office be invited to Arizona for the purpose of investigating the advisability of such a change and recommending to the Arizona Medical Association's House of Dele-

gates whether such a change would, in reality, improve the operation of Arizona Blue Shield."

RESOLUTION 9

Introduced by Yuma County Medical Society

Subject: Arizona Fiscal Agent, Medicare Plan, Part B

WHEREAS, the Board of Directors of the Arizona Medical Association, Inc., in meeting assembled September 19, 1965, representing the general membership of the Arizona Medical Association, Inc., has indicated the willingness of the membership to cooperate with the Department of Health, Education and Welfare in carrying out the provisions of Public Law 89-87, Title 18, Part B, herein identified as Medicare; and

WHEREAS, the Board of Directors of the Arizona Medical Association, representing the membership of the Association, in meeting assembled December 12, 1965, by majority vote, did recommend that the Arizona Blue Shield Medical Service, a non-profit corporation of Arizona, be favorably considered and designated as the carrier of fiscal agent for the administration of Public Law 89-97, Title 18, Part B; and

WHEREAS, by letter of December 13, 1965, the Honorable John W. Gardner, M.D., Secretary of Health, Education and Welfare, Washington, D. C., was advised of the recommendation and request; and

WHEREAS, this recommendation was acknowldeged by communication from Robert M. Ball, Commissioner of Social Security, Department of Health, Education and Welfare, on January 20, 1966; and

WHEREAS, the American Medical Association by TWX messaged dated February 10, 1966, informed the officers and individual members of the Arizona Medical Association that the Department of Health, Education and Welfare had designated the Aetna Life Insurance Company, as fiscal agent or contracted carrier, for the administration of the Medicare Plan, Part B, in Arizona; and

WHEREAS, this action by the officials of the Department of Health, Education and Welfare was taken against the recommendation of the Arizona Medical Association, Inc.; and

WHEREAS, the officials of the Department of Health, Education and Welfare have offered no official explanation for this arbitrary action; and

WHEREAS, the physician-members of the Arizona Medical Association, Inc. have traditionally and historically enjoyed good rapport with the Arizona Blue Shield Medical Service, because this service has served its subscribers and participating physicians with efficiency and reasonably low administartive costs in the processing of claims; therefore be it

RESOLVED, that the House of Delegates of the Arizona Medical Association, Inc., in annual meeting convened April 27, 1966, in Scottsdale, Arizona, does instruct and order the Board of Directors of the Arizona Medical Association, Inc., to make strong representations and vigorous protests against the unexplained and arbitrary decision of the officials of Health, Education and Welfare, in designating Aetna Life Insurance Company as contracted carrier for Arizona; and be it further

RESOLVED, that the Board of Directors of the Arizona Medical Association, Inc., be instructed and ordered to appeal, by firm demand, to the officials of Health, Education and Welfare, that they re-consider the recommendations of the Board of Directors of Arizona Medical Association, as set forth in the letter of of December 13, 1965; and be it further

RESOLVED, that in the absence of a true spirit of collective bargaining between the officials of Health, Education and Welfare and the membership of the Arizona Medical Association, Inc., and in the tradition of freedom of choice of service, that the individual members of the Arizona Medical Association, Inc., not be bound by the action of September 19, 1965, of the Board of Directors of the Arizona Medical Association, Inc., committing the entire membership to a spirit of cooperation with the provisions of Part B of the Medicare Law, but the individual members may be freed to act according to the dictates of his own conscience; and be it further

RESOLVED, that copies of this resolution be sent to the Senators and Representatives of the State of Arizona.

Not adopted, April 30, 1966.

RESOLUTION 10

Introduced by Yuma County Medical Society

Subject: Proposing Arizona Blue Shield as the Fiscal Intermediary for Medicare (Public Law 89-87, Title 18, Part B, Enacted by the 89th Congress July 30, 1965)

WHEREAS, it is recognized that the fiscal intermediary for Medicare for Arizona has already been selected by the U. S. Department of Health, Education and Welfare for the forthcoming fiscal year; and

WHEREAS, it is further recognized that while the U. S. Department of Health, Education and Welfare has the sole power finally to select the fiscal intermediary for this and future years, but is further recognized that that Department will pay heed to the wishes of the majority of physicians and surgeons in Arizona in making that selection; and

WHEREAS, Blue Shield was organized originally through the instigation and with the support of the physicians and surgeons of this State; and

WHEREAS, the majority of the Board of Directors of Blue Shield is composed of physicians and

surgeons in this State who are members of this Association; and

WHEREAS, it is the opinion of this Association that Blue Shield is not only doing a fine job and is financially solvent, but further, that it is best qualified to be the fiscal intermediary; therefore be it

RESOLVED, that the House of Delegates of the Arizona Medical Association, Inc., in its regular Session assembled in Scottsdale, Arizona, this 30th day of April 1966, recommends to the U. S. Department of Health, Education and Welfare that as soon as may be appropriate, Arizona Blue Shield be designated as the fiscal intermediary for Medicare for the State of Arizona under Title 18, Part B, of Public Law 89-97; and be it further

RESOLVED, that a copy of this Resolution be delivered to the appropriate official or officials of the United States Department of Health, Education and Welfare, as evidence of the wish and recommendation of this Association.

Tabled, April 30, 1966, to be removed therefrom at the next Annual Meeting of the House of Delegates.

RESOLUTION 11

Introduced by Yuma County Medical Society

Subject: Malpractice Insurance

WHEREAS, all Commercial Insurance carriers of professional liability insurance for physicians are becoming much more reluctant to provide any such insurance; and

WHEREAS, many such carriers are in the process of dropping such coverage from their insurance programs; and

WHEREAS, the rates of all such insurance are increasing at a prohibitive rate; and

WHEREAS, such independent insurance carriers tend to create "whip saw" subsidiary liability suits among parties to a major suit; and

WHEREAS, the total cash value of court judgements on malpractice claims have become astronomical and devastating in their amounts, the following proposals are herewith submitted for consideration and action; therefore be it.

RESOLVED, that the Yuma County Medical Society, Inc., propose to and request that the Arizona Medical Association, Inc., either establish a unified malpractice defense fund and establish legal advice and medical expert availability for the defense of any physician who is a qualified member of the Arizona Medical Association, Inc., and who might be involved in a malpractice suit; and/or be it further

RESOLVED, that the Arizona Medical Association, Inc. negotiate for a contractual obligation arrangement with one or more Commercial Insurance Companies so that members of this Association might obtain adequate malpractice insurance coverage on a group plan basis, similar to that of the Health and Accident and Life Insurance plans now sponsored by this Association; and be it further

RESOLVED, that further extended coverage be negotiated for to provide a so-called "Umbrella Coverage" to extend the usual liability coverage obtainable through the same or other commercial insurance carriers; and be it further

RESOLVED, that such contractual arrangements be made with commercial insurance carriers, in accordance with the recommended proposals of panels of expert malpractice plaintive attorneys and defense attorneys who have suggested that it is desirable to have all physicians in a given area covered under or by the same insurance carrier, so as to avoid the so-called "whip saw" maneuvering of one insurance carrier in fostering a suit against another defendant insurance carrier in trying to fix blame on individual doctors and/or hospital where more than one is a party to the suit; whereas, when more than one doctor is a party to the suit, and the same insurance carrier represents all of the parties to the suit, there is a uniform interest and effort made to give maximum coverage and service to those individual physicians involved; and be it further

RESOLVED, that, if a single insurance carrier cannot be arranged for, the combined weight and influence of the Arizona Medical Association, Inc., be brought to bear in negotiation with commercial insurance carriers to obtain maximum coverage for component physicians at minimum prices.

Not adopted, April 30, 1966.

RESOLUTION 12

Introduced by Pima County Medical Society

Subject: The Employment, by The Arizona Medical Association, Inc., of an Assistant Executive Secretary, to be in Charge of All Phases of Governmental Medicine

WHEREAS, the Congress of the United States has enacted Public Law 89-97 which makes provision for varying amounts of hospital-medical care and assistance and education for various age groups; and

WHEREAS, the Congress has enacted Public Law 89-239 which provides for the Heart Disease, Cancer, and Stroke, Education, Research, Training, and Demonstrations; and

WHEREAS, The President is making an appeal for further extension of Social Security and future expansion of services under Title 19; and

WHEREAS, it is necessary that the State Medical Association continue to offer intelligent and constructive criticism to these measures in

order that the doctors in the State of Arizona may offer good medical care to the people of the State of Arizona; and

WHEREAS, this program, if it is to be effective, will need to be expanded; it will need more help and will need more direction in order that we may keep abreast of all of the Federal, State and Local legislation dealing with health; therefore be it

RESOLVED, that it is necessary that the Arizona Medical Association through its House of Delegates, Board of Directors, Executive Committee and its various committees, continue to steadily offer conservative criticism; to cooperate with the law of the land and make every effort to help to correct and change, through legal methods, any of the now existent laws that they feel do not give the people of Arizona the best medicine; and be it further

RESOLVED, that the Subcommittee on Federal Services of the Professional Committee be elevated to the status of an ad hoc committee of the Association answerable directly to the Board of Directors, and that necessary monies from the contingency fund of the Association be made available for the hiring of the necessary personnel to assist the ad hoc committee in its duties; and be it further

RESOLVED, that the ad hoc committee develop sources of authoritative information (printed material, personal contact, etc.) concerning current and proposed medical care activities conducted by federal, state, and local governmental agencies; that it analyse abstracts, and interpret governmental medical care program guidelines, bulletins, and regulations; that it inform the Arizona Medical Association through its organizational structure of governmental medical care policies and positions; and inform appropriate governmental agencies of policies and positions of the Arizona Medical Association.

Adopted, as amended, April 30, 1966.

RESOLUTION 13

Introduced by Pima County Medical Society

Subect: Arizona Blue Shield — Payment of Fee to More Than One Physician

WHEREAS, medical consultation and/or medical care is often found necessary and important to the best management of patients who are hospitalized for surgery; and

WHEREAS, the payment of fees to more than one doctor is not necessarily covered by Arizona Blue Shield under existing contracts, and the physician who provides medical care to surgical patients is not paid by Arizona Blue Shield for his services, unless a special report justifying such services is made; therefore be it

RESOLVED, that Arizona Blue Shield shall amend its regulations so that legitimate medical consultations and extended medical care, when these services are necessary, will in some way be covered to compensate the medical consultant or attending physician; and be it further

RESOLVED, that the surgeon requesting medical consultation and extended care designate to Blue Shield that such service was necessary.

Adopted, April 30, 1966.

RESOLUTION 14

Introduced by Maricopa County Medical Society

Subject: Usual, Customary and Reasonable Fee Concept

WHEREAS, fee schedules have been the topic of much discussion in recent months; and

WHEREAS, Arizona Blue Shield, at the behest and encouragement of national Blue Shield, introduced the concept of the prevailing fee schedule to the members of the Arizona Medical Association; and

WHEREAS, Arizona Blue Shield requested of and rereived permission from the Board of Directors of the Arizona Medical Association to carry out a feasibility study only; and

WHEREAS, this feasibility study was solely implemented purportedly on the belief that Blue Shield might be named carrier for Part B of Medicare; and

WHEREAS, Blue Shield has not been named carrier for Part B of Medicare; and

WHEREAS, the Board of Directors of the Arizona Medical Association has not authorized any further exploration over and beyond the feasibility study, and especially has the Board not authorized the study to be applied in instances other than Part B of Medicare; and

WHEREAS, any application or use by Blue Shield of the feasibility study without further permissive action by the House of Delegates or the Board of Directors of the Arizona Medical Association is unwarranted; and

WHEREAS, the Professional Committee of Blue Shield has taken the following stand: the prevailing fee schedule program depends on action of the forthcoming House of Delegates of the Arizona Medical Association; and

WHEREAS, the Board of Directors of the Arizona Medical Association has gone on record recommending that the feasibility study be now considered ended, and in addition, that such records be incarcerated; therefore be it

RESOLVED, that the prevailing fee schedule concept be abandoned forthwith by Arizona Blue Shield in favor of usual, customary and reasonable fee concept; and be it further

RESOLVED, that, since the Board of Directors of the Arizona Medical Association has gone on record recommending that the feasibility

study be now considered ended, and in addition, that such records be incarcerated; and be it further

RESOLVED, that, as this survey did not result in reliable, statistical information, that these records be destroyed forthwith.

Adopted, as amended, April 30, 1966.

RESOLUTION 15

Introduced by Maricopa County Medical Society

Subject: Physician Members on Boards of Directors of Hospitals

WHEREAS, it is the avowed vocal and written declaration of hospital administrators, as well as the American Hospital Association, that "hospital trustees and management must adopt changes and develop new ways for giving physicians a full role in the future development of health services, and to go beyond organized control as it exists at present, and to find a thinking partnership" (from TRUSTEE — January 1964); and

WHEREAS, this stated goal must be reached in an atmosphere of mutual trust and a bilateral exhibition of mutual confidence, one for the other; and

WHEREAS, the ultimately responsible decision making body in any hospital is recognized as vested in the Board of Directors of each hospital; and

WHEREAS, physicians have been, as a general policy, excluded from membership on the board of directors by arbitrary concepts not believed to be valid; therefore be it

RESOLVED, that the Arizona Medical Association be recorded as voting to importune and request the responsible hospital officials to provide adequate representation by physicians, such as the chief of staff and/or physicians duly elected by the medical staff, on the board of directors of each hospital; and be it further

RESOLVED, that a committee be hereby appointed from the membership of the Arizona Medical Association to meet with a similar committee of the Arizona Hospital Association for discussion and implementation of this resolution; and be it further

RESOLVED, that the House of Delegates of the Arizona Medical Association instruct its delegates to the AMA to introduce a similar resolution in the House of Delegates of that body at the next annual meeting; and be it further

RESOLVED, that a copy of this resolution shall be forwarded to: all hospital administrators in Arizona; to the president of each board of directors of the respective hospitals; to all of the constituent state medical associations; to the American Medical Association; and the American Hospital Association.

Adopted, as amended, April 30, 1966.

RESOLUTION 16

Introduced by Maricopa County Medical Society

Subject: Medicare Utilization Committee Services — Physician Payments

WHEREAS, through the Federal Medicare legislation, the Federal Government assumed the responsibility of part payment for hospitalization of people over the age of 65; and as a result of passage of this law, the Department of Health, Education and Welfare has outlined rules and regulations for carefully implementing this law, a portion of which includes methods to prevent abuse of this law by means of utilization review programs carried on at the hospital level; and

WHEREAS, the Maricopa County Medical Society is interested in doing as much as possible to make this law workable and in keeping with the best quality of medical care; and

WHEREAS, the Medical Society recommends to its members that cooperation in keeping with good medical practice with the hospitals, the fiscal agents, and the Federal Government be carried out; and

WHEREAS, the review of utilization of this federally-sponsored program will require the cooperation of the medical staffs of the various hospitals, entailing a considerable, but undetermined amount of time, effort and conscientious work on the part of the members of the medical staffs involved, and cannot be done in a most efficient manner without the full cooperation of the medical staffs; and

WHEREAS, the supervision of utilization of such a program is an integral portion of the administration and implementation of the program; and

WHEREAS, the Medicare law and regulations drawn up by the Department of Health, Education and Welfare have made funds available for implementation and administration of this Medicare program, which includes utilization review; and

WHEREAS, it must be recognized that with changing times and with additional pressures of Governmental control of medicine in the future, such things as medical ethics, the physician's responsibility to his patients, his community and hospital, will be subject to constant review and change; and

HHEREAS, doctors have historically donated their time to serve and teach the staffs, as well as work in free clinics and on many committees and boards, to provide their patients while in the hospital with the best and safest care the medical community can offer; therefore be it

RESOLVED, that we continue to encourage the members of our profession to give freely of their time to activities to improve and protect the high standard of medical care

of the hospitalized patient; and be it further

RESOLVED, that we firmly believe that it is both ethical and proper for physicians involved to expect payment for services rendered in supervising utilization of the Medicare benefits, and that such physicians are justified in entering into agreements for such payment.

Adopted, as amended, April 30, 1966.

RESOLUTION 17

Introduced by Maricopa County Medical Society

Subject: Individual Responsibility

WHEREAS, quality medical care can only be assured by maintaining the fundamental principles of the patient-physician relationship free from the influence of third parties; and

WHEREAS, this tenet is embodied in the Principles of Medical Ethics of the American Medical Association, Section VI, which reads "A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgement and skill or tend to cause a deterioration of the quality of medical care;" and

WHEREAS, this tenet is embodied in the principles of individual responsibility wherein the physician is responsible to the patient for all aspects of rendering medical care to the best of his ability; and the obtaining and providing for the payment of medical care are the primary responsibilities of the individual citizen; and

WHEREAS, the acceptance of benefits from a fiscal intermediary has posed in the past, and will continue to pose, a distinct threat to this patient-physician relationship and can result in deterioration of quality medical care; and

WHEREAS, the attending physician's statement of individual responsibilities is reasonable and adequate for reports of medical services to patients for reimbursements and serves as a "direct billing" mechanism; thus eliminating third party interference in the "Doctor-Patient" relationship; therefore be it

RESOLVED, that the House of Delegates of the Arizona Medical Association, in its regular session assembled in Scottsdale, Arizona, this 30th day of April, 1966, endorses and approves the ethics and the principles of Individual Responsibility in the distribution of medical services by physicians; and be it further

RESOLVED, that the principle of individual responsibility is well sustained by an adequate statement or report by the attending physician, recognized as an ethical means for use by those physicians who voluntarily desire and decide to use it; and be it further

RESOLVED, that all members of the Arizona Medical Association be informed by the Board of Directors of the Arizona Medical Association of this action with supporting information in order that physicians may voluntariy preserve an ethical patient-physician relationship; and be it further

RESOLVED, that the House of Delegates of the Arizona Medical Association direct its delegation to the American Medical Association to introduce and support this resolution at the next meeting of the House of Delegates of the American Medical Association.

Tabled, April 30, 1966.

RESOLUTION 18

Introduced by Paul B. Jarrett, M.D., President

Subject: Accumulation of Statistics by HEW for Each Physician

WHEREAS, there is nothing in the Medicare Act which requires HEW to accumulate statistics separately for each physician; therefore be it

RESOLVED, that the AMA be instructed to exert its full influence to prevent HEW from requiring a carrier to provide it with statistics separately identified for each physician whether by name, number, or otherwise.

Adopted, as amended, April 30, 1966.

RESOLUTION 19

Introduced by Paul B. Jarrett, M.D., President

Subject: Profile of Physicians' Fees

WHEREAS, the most accurate profile of physicians' fees, if such be needed, will be the evidence accumulated by actual experience; and

WHEREAS, the results of a survey-type profile, whether the survey be conducted by ARMA or by by the Carrier, is likely to be substantially less accurate than the results of actual experience; therefore be it

RESOLVED, that HEW be encouraged to forego its desire for a profile of physicians' fees based upon a survey, irrespective of by whom conducted, and, instead, await the results of the only accurate methods of establishing such data, namely experience.

Adopted, April 30, 1966.

BOARD OF DIRECTORS

Meeting of the Board of Directors of The Arizona Medical Association, Inc., held Saturday, April 30, 1966, in the Convention Center of the Safari Hotel, Scottsdale, Arizona, convened at 12:15 P.M., Paul B. Jarrett, M.D., President, presiding.

ROLL CALL

PRESENT:

Drs. Brazie, Walter; Beckwith, Harry S.; Brooks, Jack E.; Cloud, Daniel T.; Derickson, Philip G.; Dexter, Richard L.; Dierker, Hugh E.; Dudley, Jr., Arthur V., Vice President; Dysterheft, Arnold H., President-Elect; Eddy, Jr., Warren D.; Finke, Howard W.; Flynn, Richard O.;

Henderson, Charles E., Secretary; Jarrett, Paul B., President; Landeen, Fred H., Treasurer; McDaniel, W. Shaw; Melick, Dermont W.; Moody, Dcward G.; Price, Robert A.; Rhu, Jr., Hermann S.; Schoen, Roland F.; Smith, Noel G.; Steen, William B.

COUNSEL:

Mr. Jacobson, Edward.

STAFF:

Messrs. Carpenter, Robert, Executive Secretary — ArMA; Robinson, Bruce E., Assistant Executive Secretary — ArMa; Boykin, Paul R., Executive Secretary — BOMEX.

BOARD ORGANIZATION

Dr. Jarrett introduced and welcomed the new Directors: Harry S. Beckwith, M.D., Northeastern District Director; Jack E. Brooks, M.D., Central District Director; Warren D. Eddy, Jr., M.D., Southern District Director; and Fred H. Landeen, M.D., Treasurer.

Arthur V. Dudley, Jr., M.D., Vice President, was duly nominated and elected by acclamation, Chairman of the Board of Directors for 1966-67. He assumed the Chair at this point.

W. Albert Brewer, M.D. (Phoenix), immediate Past President, was duly appointed to fill the vacancy in the position of Past President for the term 1966-67.

COMMITTEE MEMBERSHIP APPOINTMENTS

STANDING COMMITTEES

Benevolent and Loan Fund Committee

Daniel T. Cloud, M.D. (Phoenix), reappointed for the term 1966-69, he to continue as Chairman. Fred H. Landeen, M.D. (Tucson), Treasurer, as specified, will serve for the term 1966-67.

Grievance Committee

Miguel A. Carreras, M.D. (Tucson), Richard E. H. Duisberg, M.D. (Phoenix) and Leo L. Lewis, M.D. (Winslow) reappointed, each for the term 1966-69; W. Albert Brewer, M.D. (Phoenix), Past President, appointed Chairman, as specified, for the term 1966-67.

History and Obituaries Committee

Walter Brazie, M.D. (Kingman) reappointed, and Jay L. Sitterley, M.D. (Flagstaff) appointed, each for the term 1966-69; Robert S. Flinn, M.D., to continue as Chairman for the term 1966-67. Roland F. Schoen, M.D. (Casa Grande), Editor-in-Chief, as specified, will likewise serve for the term 1966-67.

Industrial Relations Committee

Hal W. Pittman, M.D. (Phoenix) and Stanley S. Tanz, M.D. (Tucson) appointed, each for the term 1966-69; Morris E. Stern, M.D. (Phoenix), to serve as Chairman.

Legislative Committee

Carlos C. Craig, M.D. (Phoenix) reappointed for the term 1966-69 and designated Chairman for the term 1966-67.

On motion regularly made and unanimously carried, the Chairman, Dr. Craig, is instructed to meet with Counsel, Mr. Edward Jacobson, to discuss the best possible appointments for this Legislative Committee (to fill the existing vacancies and any additional members desirable).

Medical Economics Committee

Harvey G. Brown, M.D. (Phoenix) ANES, Clarence L. Robbins, M.D. (Tucson) IM, Elmer E. Yeoman, M.D. (Tucson) IM, and Steven S. Spencer, M.D. (Flagstaff) IM, appointed, each for the term 1966-69; Ian M. Chesser, M.D. (Tucson) GS, to continue as Chairman for the term 1966-67.

Professional Committee

W. Albert Brewer, M.D. (Phoenix) appointed for the term 1966-69, to serve as Chairman for the period 1966-67; Richard L. Dexter, M.D. (Tucson) appointed for the unexpired term 1966-68 (as a replacement for Harold W. Kohl, Jr., M.D. [Tucson] entering military service on or about July 1, 1966), to serve as Chairman of the Subcommittee on General Medicine for the period 1966-67.

Referred to the President and Chairman of the Professional Committee for consideration and possible appointments are the following suggestions: W. Shaw McDaniel, M.D. (Phoenix) for the term 1966-69, to serve as Advisor to the Woman's Auxiliary for the period 1966-67; Dermont W. Melick, M.D. (Phoenix) for the term 1966-69, presently serving as Chairman of the Subcommittee on Medical Education (Boyden L. Crouch, M.D. [Phoenix] was recommended by Dr. Melick to fill this vacancy); and, in the instance of vacancy in the position of Chairmanship of the Subcommittee on Mental Health, the following individuals were suggested referred to the Arizona Psychiatric Society for recommendation of preference: Hal J. Breen, M.D. (Phoenix), Hubert R. Estes, M.D. (Tucson), T. Richard Gregory, M.D. (Phoenix), Derald G. May, M.D. (Phoenix), William F. Sheeley, M.D. (Phoenix), and Murray G. Urie, M.D. (Scottsdale).

It was regularly moved and unanimously carried that the activities of the Subcommittee on Aging be combined with that of the Subcommittee on General Medicine.

Public Relations Committee

C. Herbert Fredell, M.D. (Flagstaff) and William H. Lyle, M.D. (Yuma) reappointed, and John F. Kahle, M.D. (Flagstaff) appointed, each for the term 1966-69; Arnold H. Dysterheft, M.D. (McNary) to continue serving as Chairman.

Publishing Committee

John R. Green, M.D. (Phoenix) and Preston J. Taylor, M.D. (Tucson) reappointed, and Robert F. Lorenzen, M.D. (Phoenix) and William B. McGrath, M.D. (Phoenix) appointed, each for the term 1966-69; Roland F. Schoen, M.D., Editor-in-Chief (Casa Grande), as specified, to serve as Chairman for the period 1966-67.

Scientific Assembly Committee

Arthur V. Dudley, Jr., M.D., Vice President (Tucson), as specified, appointed for the term 1966-67; Edward Sattenspiel, M.D. (Phoenix), designated Chairman to serve for the period 1966-67. As regards those members whose terms are expiring due for reappointment or replacement, it was determined to refer the matter to the Chairman, Dr. Sattenspiel, for review and recommendation.

SPECIAL COMMITTEES

Articles of Incorporation and By-Laws Committee

Walter Brazie, M.D. (Kingman) and William B. Steen, M.D. (Tucson) reappointed, and Daniel T. Cloud, M.D. (Phoenix) appointed, each for the term 1966-67, Dr. Brazie to continue service as Chairman.

Central Office Advisory Committee

Arthur V. Dudley, Jr., M.D., Vice President (Tucson), Arnold H. Dysterheft, M.D., President-elect (McNary), Charles E. Henderson, M.D., Secretary (Phoenix), Paul B. Jarrett, M.D., President (Phoenix) and Fred H. Landeen, M.D., Treasurer (Tucson) appointed, each for the term 1966-67, Dr. Henderson to serve as Chairman.

Executive Committee

Arthur V. Dudley, Jr., M.D., Vice President (Tucson), Arnold H. Dysterheft, M.D., President-elect (McNary), Charles E. Henderson, M.D., Secretary (Phoenix), Paul B. Jarrett, M.D., President (Phoenix) and Fred H. Landeen, M.D., Treasurer (Tucson) appointed, each to serve for the term 1966-67, Dr. Jarrett, President, to serve as Chairman.

Procurement and Assignment Committee

Joseph M. Greer, M.D. (Phoenix), Robert E. Hastings, Sr. M.D. (Tucson), Ruland W. Hussong, M.D. (Phoenix), Robert M. Matts, M.D. (Yuma), Joseph P. McNally, M.D. (Prescott) and Claude H. Peterson, M.D. (Winslow) reappointed and Carl W. Ahl, M.D. (Douglas) appointed, each for the term 1966-67; Dr. Greer to serve as Chairman. In the event Dr. Ahl declines to accept the appointment, Elvie B. Jolley, M.D. (Bisbee) designated an alternate.

AD HOC COMMITTEES

Liaison Committee to the Arizona State Nurses' Association

Determined not to reappoint this Ad Hoc Committee inasmuch as it is a duplication, its function being provided for under the Professional Committee.

Arizona Territorial Medicine Publication

W. Albert Brewer, M.D. (Phoenix), Nelson C. Bledsoe, M.D. (Tucson), Robert S. Flinn, M.D. (Phoenix), Roland F. Schoen, M.D. (Casa Grande), William B. Steen, M.D. (Tucson) and Clarence E. Yount, Jr., M.D. (Prescott) reappointed, each for the term 1966-67, Dr. Brewer to continue to serve as Chairman; and Mrs. Dorothy McNamee (Tucson) and Miss Frances Quebbeman (Tucson) to continue to serve as advisory members.

It was regularly moved and unanimously carried that the Secretary prepare and forward a letter to the Arizona Historical Foundation expressing the apreciation of this Association for its participation in the publication of Arizona Territorial Medicine.

BOARDS

ArMPAC Board of Directors

John F. Kahle, M.D. (Flagstaff), Walter D. Anderson, M.D. (Yuma), Walter Brazie, M.D. (Kingman), Warren D. Eddy, Jr., M.D. (Tucson), Howard W. Finke, M.D. (Superior), Richard O. Flynn, M.D. (Tempe), William W. McKinley, Jr., M.D. (Bisbee), William G. Payne, M.D. (Tempe), William B. Steen, M.D. (Tucson), Sherman W. Thorpe, M.D. (Mesa), Paul A. Hayes, D.D.S. (Phoenix), Louis L. Ziegler, D.V.M. (Phoenix), Mrs. Clare W. Johnson (Phoenix), Mrs. Richard P. Timmons (Scottsdale), Mrs. Elvie B. Jolley (Bisbee) and Mrs. Robert G. Delph (Flagstaff) appointed, each for the term 1966-67, Dr. Kahle to continue as Chairman.

Determined not to subsidize the expenses of an additional representative to attend the AMPAC National Workshop to be held in Washington, D. C., May 21 and 22, 1966, at the Sheraton-Park Hotel, inasmuch as the President and President-elect are not available.

Referred to Counsel a proposed Constitution and By-Laws of the Arizona Medical Political Action Committee, submitted for approval, for review and consideration as to the wisdom of this Board of Directors approving such instrument, or whether it might be more appropriate for the ArMPAC Board of Directors to consider and approve same within its organization, or otherwise not adopt same by either organization.

Cardiovascular Advisory Board

Robert E. Nenad, M.D. (Phoenix) reappointed, for the term 1966-69, to serve as Chairman for the period 1966-67.

Psychiatric Advisory Board

Determined to communicate with the Arizona Psychiatric Society in order to ascertain whether or not it is desirable to continue the service of this Board. Two vacancies exist, one for a term of three years and one to fill an unexpired term for two years. In the event this Board is to be continued, the Society is to be requested to submit recommendations for appointment.

AAEC Medical Advisory Committee

John P. Heileman, M.D. (Phoenix), Schuyler V. Hilts, M.D. (Tucson) and Robert H. Thoeny, M.D. (Phoenix) reappointed to serve the Arizona Atomic Energy Commission, for the term 1966-67.

Technical Advisory Committee — Program for Aged

Robert S. Armstrong, M.D. (Tucson), Hal J. Breen, M.D. (Phoenix), John L. Cogland, M.D. (Phoenix), Robert S. Ganelin, M.D. (Phoenix), Robert J. Haley, III, M.D. (Holbrook), Richard T. McDonald, M.D. (Flagstaff), Charles W. McMoran, M.D. (Sierra Vista), Marriner W. Merrill, M.D. (Phoenix), Albert J. Ochsner, M.D. (Yuma) and Hermann S. Rhu, Jr., M.D. (Tucson) reappointed to serve the Arizona State Department of Health and the Medical Advisory Committee (appointed by the Governor) in the matter of medical problems of the program for the aged, each to serve for the term 1966-67.

AD HOC COMMITTEE ON FEDERAL SERVICES

Hayes W. Caldwell, M.D. (Phoenix), Sidney R. Kemberling, M.D. (Tucson), Darwin W. Neubauer, M.D. (Tucson), Albert J. Ochsner, M.D. (Yuma), Wallace A. Reed, M.D. (Phoenix), Clarence E. Yount, Jr., M.D. (Prescott) and George A. Spendlove, M.D., Commissioner, Arizona State Department of Health [ex-officio] (Phoenix) appointed, each to serve for the term 1966-67, Dr. Steen to continue as Chairman.

OTHER BUSINESS

Woman's Auxiliary

Mrs. Robert G. Delph, President to the Woman's Auxiliary, in its behalf, expresses the gratitude of the Woman's Auxiliary for the grant of $1000.00 provided by ARMA to assist it in carrying out its proposed programs for 1966-67. An outline of the program was included with the report together with an itemization of its budget. RECEIVED.

Alternate Delegate to AMA

Philip G. Derickson, M.D. (Tucson) nominated and unanimously elected to serve as Alternate Delegate to

AMA for the period May 1, 1966, to December 31, 1966, to fill the unexpired term of the Alternate Delegate to AMA, William B. Steen, M.D., the latter elected Delegate to AMA by the House of Delegates, April 30, 1966.

AMA Dues Increase

Determined that the Delegates to AMA shall attend the Annual Meeting of AMA "uninstructed" as regards the proposed dues increase of the parent body effective in 1967.

Employee Leave of Absence

It was regularly moved and unanimously carried that Paul R. Boykin be reappointed as our employee on a leave of absence.

Blue Shield Task Force

It was regularly moved and unanimously carried that we recommend a few qualifications concerning the Task Force (Blue Shield) and its operation: (1) That it be called for as soon as possible; (2) That as members of this Task Force there should be included a representative from a plan from a state that has a "usual and customary fee plan", such as Delaware or Kentucky, and that they also include a representative from a state that has gone through the problem of separation of Blue Cross and Blue Shield so that we can gain experience as to whether this is advisable or not advisable; and (3) That the Task Force should make available time to meet with individuals and representatives of groups in confidential or executive session.

MEETING ADJOURNED AT 2:05 P. M.

Charles E. Henderson, M.D.
Secretary.

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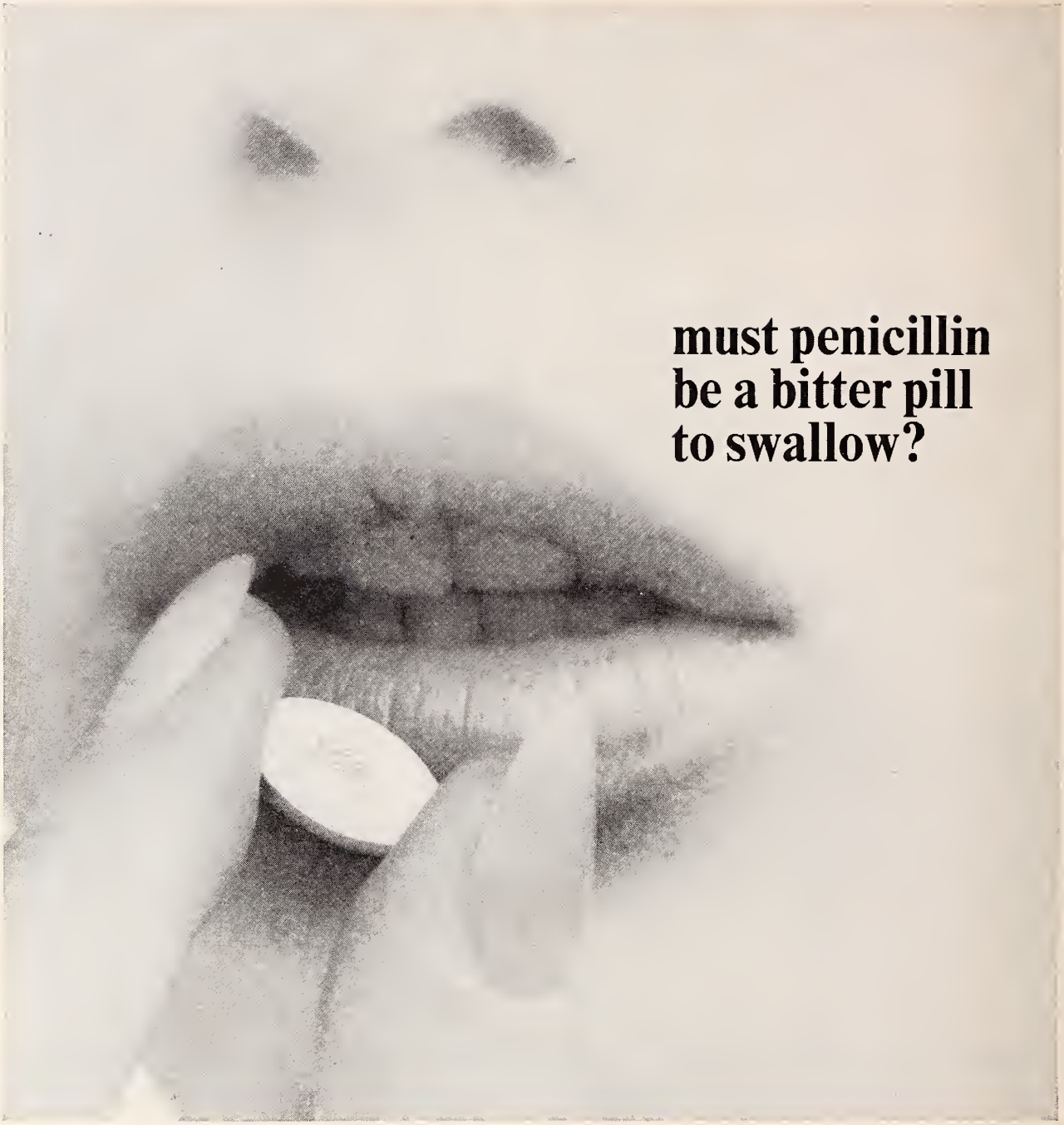
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GASTROPARESIS DIABETICORUM

The neurologic complications of diabetes are multitudinous. Here is a case report and discussion of a complication with a good prognosis.



Robert E. Kravetz, M.D.

PATIENTS with diabetes mellitus may present with a variety of gastro-intestinal complaints; some of them are not well known because of the scant reference to them in standard texts.[1] The anorexia, nausea, vomiting, and epigastric pain of diabetic acidosis are most common and quite transient. Sometimes acute gastric atony may simulate a surgical abdomen.[2] A more chronic type of gastric motor disturbance usually associated with other manifestations of autonomic dysfunction is less readily appreciated; it has been called gastroparesis diabeticorum and may or may not be symptomatic. [3,4]

Recently a patient was observed who had this complication of her diabetes. Gastroscopic findings in this condition have not been previously recorded and the following case is therefore being reported.

A 64 year old white, female diabetic was admitted to the Yale-New Haven Hospital on August 6, 1963. On the day prior to admission she awoke with nausea and crampy mid-epigastric pain which was followed by four to five episodes of vomiting gastric contents but no blood. Because of progressive weakness and continued signs and symptoms, she was admitted for further evaluation.

Additional questioning revealed that the patient had noted vague epigastric and lower abdominal cramps as well as recurrent vomiting for 15-20 years. This was related to periods of poor control of her diabetes and subsided with improved management. For the previous five-six months, the pains were more severe, persistent and located predominantly in the epigastric region. Despite a good appetite she had lost ten pounds in two months. No other gastrointestinal symptoms were noted and constipation and diarrhea were not a significant problem.

Diabetes mellitus was diagnosed in 1940 and was controlled with 40 units of NPH insulin daily until five months ago. Subsequent to this she had four admissions for diabetic acidosis with no specific precipitating cause noted. Several previous admissions were for ketosis and hypoglycemia.

An admission in 1958 was for transient sixth nerve palsy. Urinary tract infections had complicated several admissions but responded to appropriate antibiotic therapy. A sensation of incomplete voiding relieved by manual compression of the bladder, nocturia and dribbling had been present for 5-6 years. Progressive numbness of the feet and severe parasthesias had become a problem recently. She denied postural hypotension or abnormal sweating.

Physical examination revealed an elderly white-haired female in moderate distress appearing older than her stated age. Blood pressure was 130/70, pulse 100/minute and regular, temperature 98°, and respirations 60/minute. The skin was dry with only fair turgor. Examination of the head, nose, ears and throat was unremarkable. Extraocular muscles were intact, pupils reactive, and fundi were surprisingly normal. A few scattered rales were present at both bases but cleared after coughing. The heart was not enlarged and the sounds were of good quality; a grade 2/6 systolic murmur was heard at the apex. The abdomen was non-tender despite her symptoms, and there were no enlarged organs or masses present. Rectal and pelvic examination were normal. Two plus pitting edema of the extremities was present; there were no pulses palpable below the popliteals.

Neurologic examination revealed intact cranial nerves with no motor weakness. Position sense, vibratory sensation and touch were markedly decreased in the lower extremities. Deep tendon reflexes in the upper extremities and knee jerks were active and equal; ankle jerks were absent. There were no pathologic reflexes present.

Laboratory data: Hematocrit 36%, white blood count 14,000 per cmm with 78 segmented forms, 1 eosinophile, 14 lymphocytes and 7 monocytes. Blood urea nitrogen was 33mg%, glucose 874 mg%, sodium 133 mEq/liter, potassium 5.1 mEq/liter, and bicarbonate 36.0 mEq per liter. Serum amylase and lipase were normal. The urine was clear with a specific gravity of 1.022, 4 plus protein, 4 plus glucose, 4 plus acetone and 3-5 white blood cells/HPF. Urine culture was sterile. Electrocardiogram revealed left ventricular hypertrophy and chest X-ray showed minimal enlargement of the left ventricle. Following therapy for the acidosis, the blood urea nitrogen was 15 mg%, bicarbonate 27 mEq per liter, chloride 96 mEq/liter, sodium 132 mEq/liter and potassium 3.5 mEq per liter.

X-ray Studies: An oral cholecystogram performed on the seventh day revealed contrast material in the stomach 14 hours after administration of the dye (Figure 1). It outlined many



Figure 1



Figure 2

irregular filling defects suggesting an obstructing lesion of the gastric outlet. An upper gastrointestinal series performed two days later showed may moveable filling defects from the fundus to the pylorus. (Figure 2) Peristalsis was diminished but present, and the walls were not rigid; the duodenal bulb and upper small bowel were normal. The diagnosis of bezoars was made.

During the first 24 hours of hospitalization the patient received 6,000 ml of intravenous fluids and 400 units of crystalline zinc insulin with marked clinical and chemical improvement. Following the demonstration of the intraluminal filling defects she was questioned regarding any peculiar eating habits or ingestion of foreign material but denied this.

Gastroscopy was performed 10 days following admission at a time when her diabetes was well controlled. An Eder-Huffer gastroscope was introduced with ease following preliminary evacuation of the stomach with an Ewald tube which yielded only small amounts of partially digested food. Excellent visualization was obtained. The angulus was in the normal position, antral peristalsis was sluggish but present and patchy gastric atrophy was observed. In the proximal one half of the stomach large amounts of foreign material identified as food were noted to be floating freely, but in some areas it was adherent to the wall and could not be easily dislodged after air insufflation. No ulcerations of the mucosa were visualized and there was no rigidity of the wall.

Because of the patient's peripheral neuropathy and evidence of autonomic dysfunction as manifested by her genito-urinary complaints, the diagnosis of gastroparesis diabeticorum was entertained to explain her gastric retention. The recent deterioration of her diabetic control was attributed to the delayed gastric emptying and the action of insulin at a time when the blood sugar was not elevated. Reactive hyperglycemia was then thought to initiate her ketosis. With frequent small feedings and appropriate spacing of her insulin dosage her diabetes was controlled and she remained well.

DISCUSSION

Early texts dealing with diabetes mellitus mention only in passing the existence of disturbed gastric function and attached little clinical significance to it. Rundles[5] in his classic monograph on diabetic neuropathy mentions five cases who had gastric retention; other evidence of disturbed visceral neuropathy such as postural hypotension, impotence, genito-urinary difficulties, sphincter abnormalities, and altered sweating patterns suggest that gastrointestinal disturbances should also be considered to be due to autonomic nerve dysfunction. Kasander[4] incidentally discovered a case of asymptomatic gastric retention and found five additional cases in 25 diabetics examined. His cases were all associated with neuropathy; he called this condition "gastroparesis diabeticorum" and stressed the significance of this aspect of diabetic neuropathy.

This condition encompasses a wide clinical spectrum and may be divided into an acute and chronic form. The acute type comes on after a period of stress in patients who may or may not have other signs of neuropathy. Gastric atony associated with ketosis is not to be confused with this. The chronic asymptomatic type described by Kassander[4] is the other extreme with all gradations in between possible.

Peristalsis is mainly responsible for gastric emptying, although it may occur without it. Following vagotomy, gastric retention is noted and the radiographic findings can be similar to those in patients with gastroparesis diabeticorum. The disturbed motor function in this condition is attributed to degenerative changes in the vagus nerve and explains the above similarity; lesions in the nerve plexuses of the stomach wall have also been postulated.[6]

In most cases of gastroparesis, diabetic neuropathy is present or precedes the syndrome, and other manifestations of autonomic dysfunction are usually noted. These degenerative neurologic disturbances have usually reached a moderately severe stage by the time they manifest themselves.

The discovery of this condition in the present case was preceded by a history of peripheral neuropathy, autonomic genito-urinary dysfunction and recurrent episodes of hypoglycemia and ketosis. Diabetic control is dependent upon a proper diet and normal absorption of ingested foods. If insulin or oral hypoglycemic agents are also used, they must exert their maximum effect at a time when the blood sugar is elevated. In this patient, it is postulated that marked gastric retention permitted insulin to produce hypoglycemia with probable subsequent accelerated release of anti-insulin factors via adrenal-pituitary blood sugar raising hormones, resulting in hyperglycemia, glucosuria, fat mobilization and ketosis. This initiated progressive ketosis.[7]

This condition should be suspected in any diabetic with poor control, unexplained weight loss, vague gastrointestinal symptoms and other manifestations of neuropathy. The typical X-ray picture of an atonic, dilated stomach devoid of effective peristalsis with retained food and secretions suggests the diagnosis if other evidence for gastric retention due to an organic obstructing lesion are excluded. Active peristalsis may not be completely absent as in this case. No definite features of this condition distinguish it from other forms of gastric atony, and a similar picture may be found in highly emotional individuals, but this is usually a transient phenomenon.

The radiographic and gastroscopic findings should be interpreted with a knowledge of the clinical state. If the gastroscopist notes an atonic stomach with sluggish or absent peristalsis, retained secretions and food, and evidence of gastritis without an obstructive lesion, he should be highly suspicious that he is dealing with a diabetic patient.

Retained food can usually be readily moved about with air insufflation, but this is not true for bezoars. With simple retention of food, there are no mucosal abnormalities, but a bezoar may show surrounding ulceration of the mucosa. In this patient it is quite possible that some of this adherent mass actually represented a bezoar which had developed because of the prolonged gastric stasis.

It is also important to recognize that retained food particles may be mistaken for a carcinoma. However, careful examination of the stomach will usually lead to the correct diagnosis. Not infrequently, identification of pieces of meat, vegetables, etc. is helpful. The mucosa is not infiltrated as in carcinoma, although sometimes the diagnosis may be difficult.[8] When doubt persists, gastroscopy may be repeated after a more prolonged fast and vigorous lavage with a large bore tube. Instillation of enzymes into the stomach may help to digest the retained material, and gastric cytology may be employed, if doubt persists.

Various forms of therapy have been advocated in this condition. The use of bethanechol chloride (Urecholine) because of its parasympathetic effect has been tried without success. Two of Howland's[2] cases had surgery without benefit. Careful dietary control with frequent small feedings, and adjustment of insulin dosage has yielded the most satisfactory results. Prognosis is excellent and dependent upon the severity of the diabetes and not this condition per se.

SUMMARY

A patient with uncontrolled diabetes mellitus due to gastroparesis diabeticorum is presented. The pathogenesis, radiographic and gastroscopic findings and treatment of this condition are discussed. Recognition of this condition will allow for more intelligent management of the diabetic patient.

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Reappraisal Of The Capacitor Discharge Method In The Treatment Of Cardiac Dysrhythmias

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The capacitor discharge method in the treatment of cardiac dysrhythmias has been demonstrated to be an effective technique in restoring sinus rhythm to patients with various cardiac dysrhythmias. Its use is recommended to be avoided in rhythm disturbances caused by Digitalis, and such preparations should be discontinued well before cardioversion is attempted.

IN 1962 Lown[1] demonstrated the clinical applicability of an externally administered synchronized electrical shock of the eapacitor discharge type in the treatment of cardiac dysrhythmias.[4] The shock was delivered outside the vulnerable period of the cardiac cycle to avoid ventricular fibrillation. The shoek depolarizes the heart and allows the sinus node to resume as the pacemaker.

Since 1962 this technique has been shown to be simple, effective, and safe. Approximately 90% of properly selected patients ean be eonverted to sinus rhythm. In addition, it is effective in the dysrhythmias resistant to drugs such as Pronestyl, Quinidine, and Digitalis.[2] It is effective in the supraventricular as well as the ventricular rhythm disturbances and its effectiveness seems unaffected by the underlying heart disease.

In Lown's large series of 450 patients there have been no deaths as a result of this teehnique, and this has been true in my experience of 225 patients.[3] This is in comparison to the 1-3% mortality rate in the cardiac dysrhythmias treated with Quinidine.

The most common post conversion problem has been the emergenee of ectopic rhythms primarily due to excessive digitalis such as polytopic ventricular contractions, ventricular bigeminal rhythms, repetitive paroxysmal ventricular tachyeardia and nodal rhythm.

The most commonly treated dysrhythmia is atrial fibrillation and almost invariably the patients are receiving one of the digitalis drugs. Lown[1] has nicely demonstrated the reduced threshhold of ventricular tachycardia to electrie shoek in the digitalized animal and this is independent of any overt manifestation of over digitalization.[3] He has also demonstrated that eardioversion is both hazardous and ineffective in digitalis induced dysrhythmias.[3]

Other post conversion complications have been systemic arterial emboli, hypotension, elevated body temperature, and pulmonary edema.

About 10% of patients with atrial fibrillation converted to sinus rhythm have clinically deteetable peripheral systemic emboli. They may occur early or within a week of conversion probably depending on the delayed return of effective left atrial systole.[4] This is the same situation

as obtained in conversion with Quinidine and the numbers are so small as to preclude an accurate estimation of the value of anticoagulation prior to conversion. However, in patients with the recent onset of atrial fibrillation and mitral valve disease, anticoagulation should be accomplished prior to conversion.

Transient hypotension has occurred rarely along with short episodes of elevated body temperature. These are unrelated to detectable myocardial necrosis. Transient hypotension may occur with a slow ventricular rate or particularly if scopolamine has been used during anesthesia.

Pulmonary edema[5] has occurred following cardioversion and has been related to a reduction in left ventricular stroke work[6] or a delayed return of left atrial activity[4] after conversion.

The primary problem following cardioversion is the return of the original ectopic rhythm. The use of cardioversion presupposes that the factors initiating the ectopic cardiac rhythm are transient and that a dysrhythmia once initiated is self-sustaining.[3] Even with Quinidine or Pronestyl prophylaxis about 50% of patients with atrial fibrillation converted to sinus rhythm will revert to atrial fibrillation. In patients with valvular heart disease and atrial fibrillation, the improvement in myocardial performance and the reduced risk of systemic emboli make the conversion to sinus rhythm mandatory in spite of the high reversion rate. Conversion of such patients to sinus rhythm should be done primarily after surgical correction of the valvular abnormalities.

After three and one half years experience with cardioversion, it has been demonstrated to be a simple, safe, and effective technique in restoring sinus rhythm to patients with various cardiac dysrhythmias and various types of cardiac disease. Its use should be avoided in rhythm disturbances caused by digitalis or in patients who are over digitalized. Depending on the digitalis preparation it should be discontinued well before cardioversion is attempted.

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Thermography in Health & Disease



Travis Winsor, M.D.

The Oxford Dictionary recognizes the use of the word "Thermography" since 1840. Recently developed methods place the word in a different context and there is now promise of using a new technique as an aid in diagnosis.

INTRODUCTION

Thermography is a new science, that of interpreting heat patterns of the body. This new technique is different from other older thermometric measurements in that a picture of the surface of the body is obtained which shows the temperature differences between thousands of temperature points. The picture appears as black, white and greys. The machine is set up in such a way that white represents relative warmth compared to grey or black. The sensitivity of the instrument is usually set at a 1/10 of a degree centigrade difference in temperature between two discernible grey intensities. Also, the machine can be set so that there is a ten-degree centigrade difference between two shades of grey. The device is electronically sound. It is based upon an old principle, that of recording the temperatures from two or more parts of the body. It is of interest that Hippocrates, over two thousands years ago, utilized the temperature differences of the body frequently as an aid in diagnosis. For example, he said that one part of the body was warm as compared with another when inflammation was present in the warm part. The thermograph*, the instrument which makes the picture, is sensitive to ten micron heat waves which eminate from the surface of the body. It is these waves which result in the thermogram, which

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*Barnes Engineering Company, Stamford, Connecticut.

is a picture recorded on polaroid film. It takes four minutes to scan the body and ten seconds to develop the film. For convenience, thermograms are taken with the aid of a mirror which moves right and left.

No visible light is necessary for taking the picture and a picture of the body can be taken in total darkness as the body is usually warmer than the background temperature of the room. The basic principle of recording temperature differences is fundamental and is similar to X-ray which records differences in density.

It is the purpose of this paper to point out the applications of the thermograph to the various medical specialties.

GENERAL PRACTICE

Thermograms should be of utmost value to the general practitioner as the thermogram would help in screening patients for cancer of various parts of the body; rheumatoid or gouty arthritis; vascular diseases due to arteriosclerosis or collagen disorders; fractures or back injuries; the painful limb as a result of work injury; work evaluation; acute abdominal lesions, such as acute appendicitis; certain endocrine disorders, such as diabetes; and other conditions.

CANCER DETECTION

Cancers of bone, breast, skin and liver, as well as other cancers are warm with respect to surrounding tissues as a rule; whereas, cysts are cold, thus a warm lesion in the breast could be cancer or an abscess. These two conditions are often clinically different. Figure 1 shows pictures of cancer of the soft tissues of the thigh and of bone.

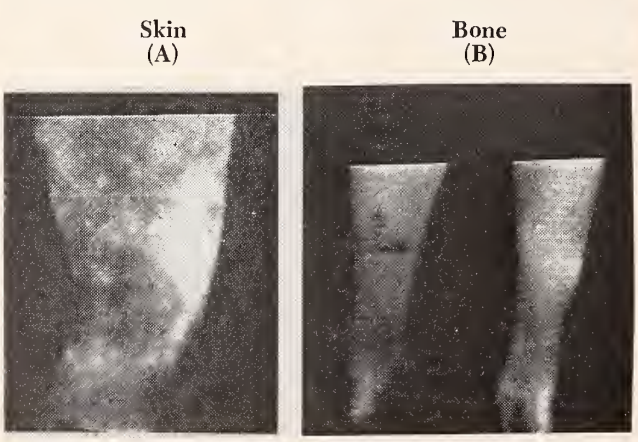


Figure 1: A. Cancer of the thigh.
B. Cancer of the bone.
The cancer is white and hot.

RHEUMATOLOGY

Arthritis, especially in its acute or subacute stages usually produces inflammation and heat. This is characteristic of rheumatoid and gouty arthritis and to a lesser extent, osteoarthritis. These conditions have rather characteristic heat patterns around joints (Figure 2). In rheumatoid arthritis, many of the joints are involved: often fingers, wrists, elbows, shoulders and the back. With gout, this involves the large toes and with osteoarthritis, the terminal digits are involved.

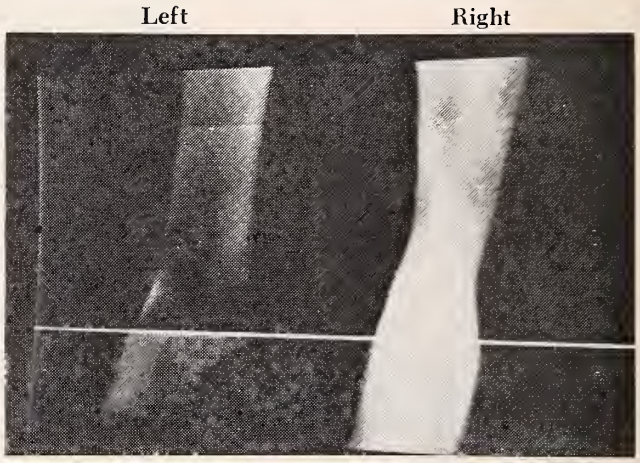


Figure 2: Rheumatoid arthritis, showing hot spots around the joint. A hot ankle is shown.

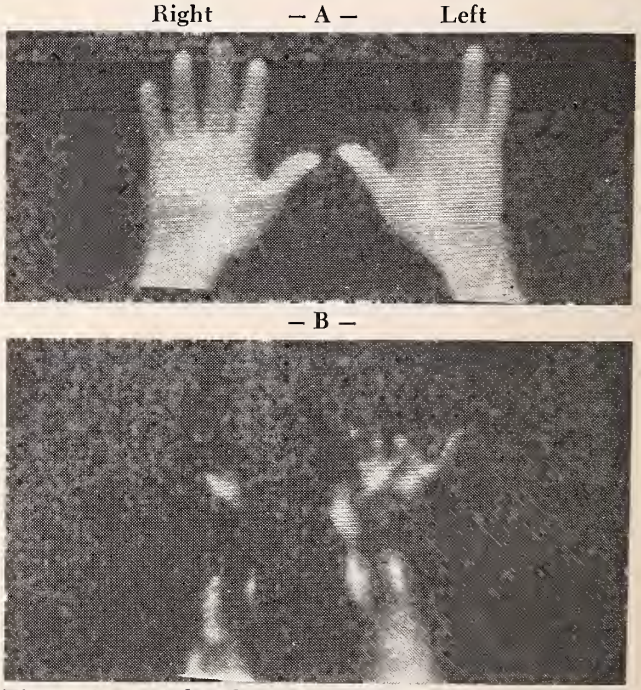


Figure 3: A. Scleroderma, showing cold fingers where arterial obstruction has occurred.
B. The radial and ulnar arteries at the wrists are patent, as shown by the white spots.

INTERNAL MEDICINE

Vascular diseases, such as periarteritis nodosa; or the collagen disorders, such as disseminated

lupus; or arterial obstructions, such as thrombosis, produce cold lesions especially if the arteries are completely obstructed. The hands of the patient with scleroderma are shown in Figure 3. Normally the tips of the fingers are warm and these warm tips are no longer present when vascular disease involves the digital arteries (Figure 3).

ORTHOPEDICS

Fractures produce hot lesions. As healing occurs, the heat diminishes. It is not known how long it takes for broken bones to become the same temperatures as the bones of the unbroken limb (Figure 4).



Figure 4: Fracture of a toe which shows increased heat as a result of the fracture. (Courtesy of R. Bowling Barnes, Stamford, Conn.)

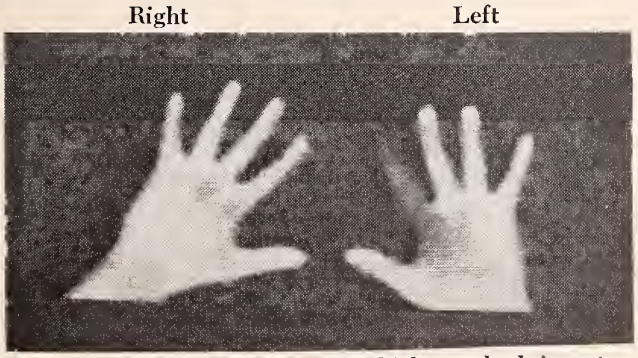


Figure 5: Trauma to a finger which resulted in arterial occlusion and coolness of the digit.

INDUSTRIAL MEDICINE

Often the patient complains of a painful limb. X-rays are normal; however, the thermogram shows a hot area, indicating an inflammatory process. This may follow an injury. Figure 5 shows a patient who complained of pain in a digit after an alleged injury. The thermogram showed a cold finger, which indicated arterial occlusive vascular disease as a result of trauma.

VASCULAR DISORDERS

Arteriosclerosis obliterans often produces coldness of a limb. Characteristically an obstruction of the popliteal artery produces coldness below the level of the obstruction, but increased warmth develops above the obstruction where the collateral circulation has come to the surface. Usually the characteristic temperature line occurs about four inches below the level of the arterial obstruction of the popliteal artery (Figure 6).



Figure 6: Temperature line associated with popliteal artery obstruction. Below the obstruction, the leg is cold and above the obstruction, the leg is unusually hot due to collateral circulation.

GENERAL SURGERY

Inflammatory lesions of the abdominal organs, such as acute appendicitis, appears as a hot spot on the surface of the body.

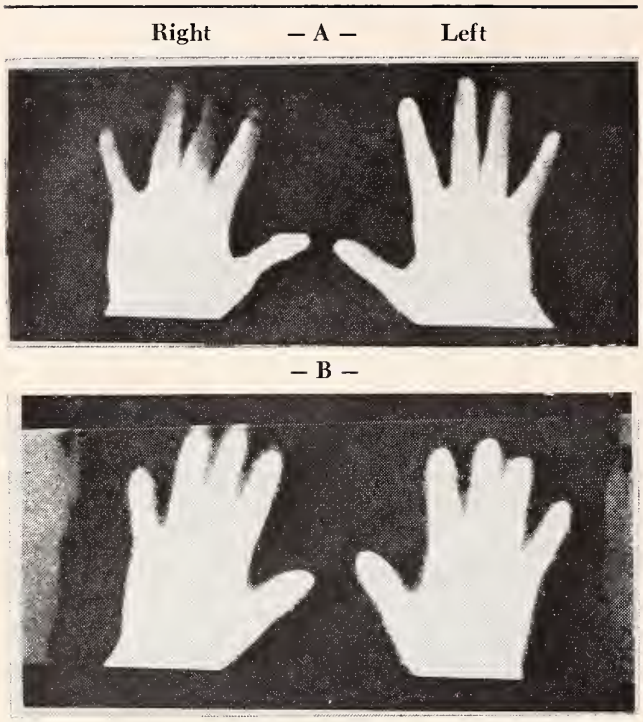


Figure 7: A. Loss of normal hot spots at the tips of the finger in a patient with diabetes with endarteritis obliterans, that is, arterial obstruction of the small vessels. She smokes two packages of cigarettes a day.
B. After stopping smoking three days, the circulation was increased markedly.

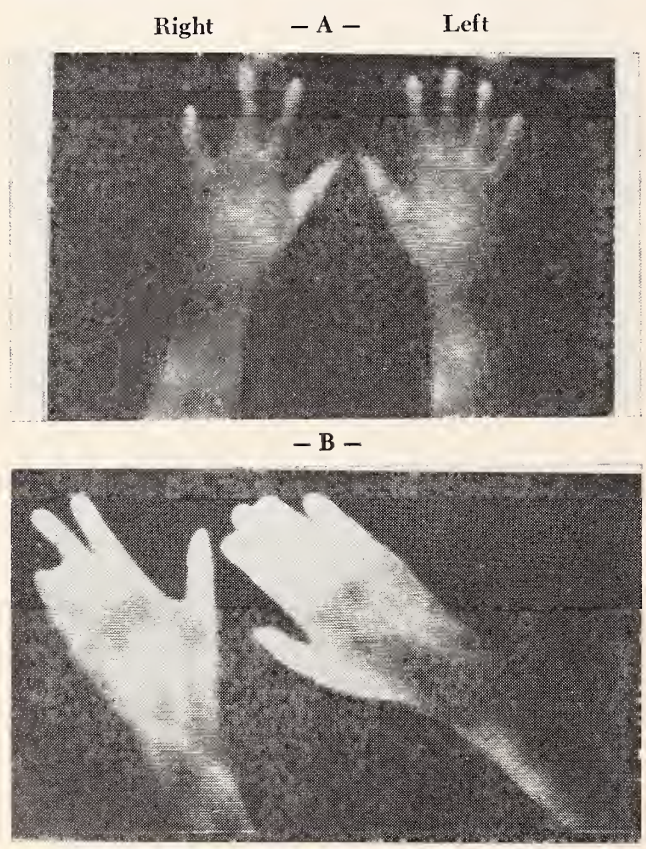


Figure 8: Vasodilator Ilidar:
A. Before and
B. After treatment, which increased the circulation to a causalgic hand.

ENDOCRINOLOGY

Diabetes mellitus characteristically produces vascular lesions which involve the fingers and the toes. There is a loss of the normal hot spots at the tips of the fingers. Often remarkable improvement occurs on stopping smoking, which results in increased circulation to the digits (Figure 7).

EXPERIMENTAL MEDICINE AND SURGERY

The thermogram is of particular advantage in determining 1) the site and degree of action of vasodilating drugs; 2) the rate of healing of ulcers; and 3) the results of experimental surgery (Figure 8).

DISCUSSION

Thermography is a new discipline which allows temperature differences of the body to be displayed. The device has a wide field of application and cuts across many specialties. There is a place for the thermograph in many fields of medicine and surgery and in this respect it is like radiology. Thermography has developed to the point now where definitive information is at hand which will allow the device to be applied immediately to a variety of different situations in such a way that new information can be provided about the patient's disease. As the procedure can be completed in about five minutes and the film is inexpensive, the total operating costs are not high. Since the fundamental principle of the instrument is sound; that is, the graphic display and measuring of temperature differences between various parts of the body, it would appear that this new modality will continue to be used with increasing success as more knowledge is obtained relative to indications for its use.

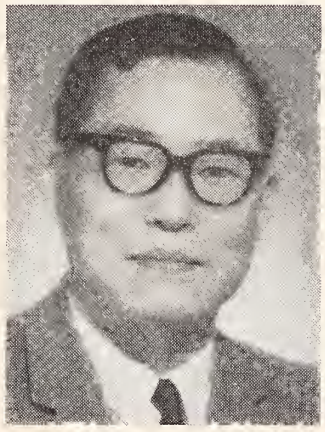
SUMMARY

Thermography is a new modality which photographs temperature differences of various parts of the body. Since the recognition of hot and cold spots on the body is fundamental in diagnosis, it would appear that this device will rapidly gain in popularity.

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The Highlights of the 23rd International Congress of Physiological Sciences — September 1965 Tokyo, Japan — Part II



Thomas P. K. Lim, M.D.

IN the sessions of Free Communications many interesting papers were presented. In the section of circulation, W. M. Booker and his associates from Washington, D. C. presented experimental studies on the effect of hypothalamic stimulation on blood pressure. Previously it has been shown that hypothalamic nuclei stimulation causes an increase in blood pressure and this response is related to catecholamine release. The authors discussed the responses of the blood pressure to hypothalamic stimulation following acute and chronic treatment with nicotine in three groups of cats; control, reserpine pretreated, and adrenalectomized. In control cats the blood pressure was markedly increased prior to that seen in hypothalamic stimulation. Stimulation of the hypothalamus resulted in further increase in blood pressure. Thus it appears that the arterial system is sensitized to blood pressure increases in nicotinized animals. In reserpinized and adrenalectomized animals nicotine causes some elevation of blood pressure following hypothalamic stimulation.

A. M. Brown of London, England, presented data which showed the response of afferent cardiac vagal nerve fibres to changes in coronary artery pressure in anesthetized cats and dogs. Marked excitation of mechanoreceptors was produced by an increase in coronary arterial pressure and by small doses of intra-coronary veratrine.

A. Arieff and F. S. Grodins of Chicago, Illinois, also presented evidence which showed there are receptors in the mesenteric vascular bed which are responsive to pressure and/or flow variation, and can reflexly influence systemic arterial pressure. In their experiment, the occlusion of the superior mesenteric and coeliac arteries produced large increases in systemic arterial pressure which were equal to those of bilateral common carotid occlusion. However bilateral renal artery occlusion had virtually no effect. The increases in response to both superior mesenteric and coeliac occlusion and carotid occlusion were practically abolished by autonomic nervous system blockade.

G. Ogihara and S. Deguchi of Osaka, Japan, presented a paper concerning the A-V block and extrasystole seen in senior high school student athletes. These abnormalities disappeared after hard exercise to appear again several minutes later. They feel that these phenomena are not caused by organic changes of the heart but due to imbalance of autonomic nervous system.

A U-shaped auxiliary ventricle to aid the failing heart was demonstrated by T. Akutsu and A. Kantrowitz of Brooklyn, New York. A U-shaped auxiliary ventricle with a flexible activating bulb

and no inside valves was permanently implanted between the ascending and descending aorta in dogs. It was connected to the aorta by cuffs of Dacron arterial prosthesis and contracted in series with the left ventricle on application of compressed air, controlled electronically. The system has been operating intermittently up to over 100 hours for a 40-day period, a frequent pressure monitoring indicated at least a 50% reduction in left ventricular work and 20% increase in coronary flow, with no change in cardiac output.

In the field of circulatory dynamics the mathematical description of the cardiovascular system by J. R. Womersley has been one of the outstanding contributions in cardiac physiology. Wormersley published his paper in 1955-1957 in close collaboration with V. A. McDonald and M. G. Taylor. The Womersley theory merits serious study by all who are planning to enter the field of circulatory dynamics for the following reasons: First, the circulatory systems analysis presented by him is a most realistic approach of all those that have been proposed. Secondly, throughout his mathematical development he presents assumptions stating clearly the degree of approximation used in mathematical terms that could be readily translated to known physiological data. Thirdly, he has reduced his final linear solutions into simple easily useable forms.

E. O. Attinger of Philadelphia, Pennsylvania, attempted experiments on models and dogs to evaluate the validity of Womersley's theory of pulsatile blood flow. The data were analyzed on-line using the LINC digital computer. Experimental values obtained for blood flow and phase velocity differed from those expected from theory by $\pm 20\%$ which is remarkably good agreement in biological system. There are two factors which might contribute to this difference. The first has to do with measurements per se, particularly with the difficulties involved in the accurate estimate of small pressure gradients, radii and phase shifts. Secondly, one has to consider the possibility that some of the assumptions underlying the theory are inadequate. Attinger's study showed that agreement between experimental and theoretical prediction is better at higher heart rate suggesting that deviation due to experimental errors is more important than that due to inadequate assumptions in mathematical derivation.

D. E. Gregg et al. from Washington, D. C., presented a paper in which a standardized preparation has been developed measuring aortic pressure and flow, right and left coronary inflow, and myocardial metabolism in unanesthetized dog. In the resting animals it was observed that the right coronary flow pattern is similar to an aortic blood pressure pulse with systolic flow exceeding the diastolic. However in the main left coronary artery and its major branches the coronary systolic inflow was only 7 to 45% of the diastolic inflow, thus confirming that the blood flow of the left coronary artery during diastole is greater than during the systole. Another important finding is that stroke coronary flow can undergo considerable change without significant change in the blood pressure and heart rate.

L. M. Linde of Los Angeles, California, studied the effects of digitalis on the pulmonary circulation on intact unanesthetized dogs. With normal pulmonary blood flow fast acting acetylstrophanthidin and slow acting digoxin produced changes differing only in time sequence. Heart rate slowed and cardiac output decreased significantly although stroke velocity increased. Vascular pressures changed minimally but the pulmonary vascular pressure gradient (pulmonary artery minus left atrial pressure) decreased. In this series, pulmonary vascular resistance (PVR) did not change with digitalis.

In the section of body fluids, E. B. Brown and his associates from Kansas City, Kansas, proposed that potassium ion moves from intracellular to extracellular fluid when extracellular pH falls, and in the opposite direction when extracellular pH rises. This relationship is supposed to hold whether the pH change is metabolic or respiratory. They have measured intracellular skeletal muscle pH in vivo by DMO method in dogs before and two hours after infusing hydrochloric acid while hyperventilating the animal. By this procedure extracellular pH was held constant while intracellular pH increased. In this experiment intracellular-extracellular hydrogen ion ratio fell and potassium moved from intracellular to extracellular fluid as judged by the rise in extracellular potassium concentration and by the increase in calculated total extracellular potassium. This is another example of the application of intracellular pH measurement in vivo.

J. Ladefoged from Copenhagen, Denmark, described his technique of renal cortical blood flow measurement in normal man. His tech-

nique consists of injecting radioactive inert gas xenon-133 into the renal artery and externally monitoring wash-out curve of xenon-133. Forty comparisons between renal cortical blood flow in man obtained by this technique and total renal blood flow measured by the para-amino hippuric acid clearance technique were carried out. A good agreement between the two methods was found as revealed by the high coefficient of correlation. It appears that the xenon-133 wash-out technique provides a satisfactory measure of renal cortical blood flow. According to this author the cortical blood flow varies between 3.5 to 5.0 ml/gm/min in normal man.

In the section of respiration G. Torelli, A. Pini, and R. Margaria from Milano, Italy, described that the affinity of the fourth O_2 molecule of hemoglobin is much higher than the affinity of the other three O_2 molecules. In increasing the ionic strength of the hemoglobin solution, the affinity for hemoglobin of the first three O_2 decreased without appreciably affecting the affinity of the fourth. The authors postulated that besides an intramolecular, an extramolecular interaction could take place between reduced hemes and O_2 molecules.

K. E. Schaefer from Groton, Connecticut, described the pulmonary CO_2 toxicity in guinea pigs. When the guinea pig is exposed to a gas mixture having 15% CO_2 in 21% O_2, first there developed a rapid fall in extracellular pH to 7.0 in association with the development of pulmonary edema and inhibition of the fibrinolytic system as indicated in an increase in serum antiplasmin and a loss of plasminogen activator activity in the lung. Then, after 24 hours of exposure, the intracellular pH of the lungs was markedly reduced commensurating with a rise in surface tension, disappearance of normal lamellar bodies in the granular pneumocytes and development of hyaline membranes. All these changes were reversed during the compensated phase of respiratory acidosis during which the blood content of the lungs decreased while the fat content increased. This is one of the first experimental descriptions of the CO_2 induced hyaline membrane disease in guinea pigs.

L. Cudkowicz and A. O'Neill from Nova Scotia, Canada, presented a study on the effect of lung volume changes on cardiac output in man. The breath-holding at the level of functional residual capacity in ten patients with lung diseases shows that left ventricular output exceeded the right by a mean of approximately 0.7 L/min or 11% of the left ventricular output. At full lung inflation the flow through the main pulmonary artery was doubled and the pulmonary arterial pressure fell slightly while pulmonary arterial wedge pressure declined also slightly. Associated with this was a fall in total pulmonary vascular resistance when the lung was deflated to the level of the residual volume. The right ventricular and the left ventricular output both decreased by 22% and 37% respectively while mean pulmonary arterial pressure and wedge pressure rose slightly with increased total pulmonary vascular resistance.

On the occasion of the 2nd International Respiratory Dinner, the Japanese VA/Q Club presented a beautiful "NOLEN" (trade insignia which is hung at the entrance of large shops in Japan) to each member of respiratory physiologists from abroad. Figure 2 is a photocopy of this "NOLEN" which depicts "KAPPA" and O_2-CO_2 diagram. The "KAPPA" is an imaginary nocturnal animal in Japan.

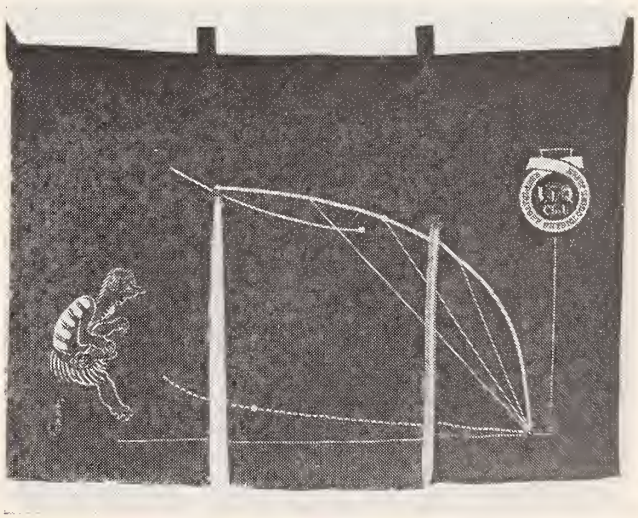


Figure 2

In the section of body temperature regulation Knut Schmidt-Nielsen and E. C. Crawford of Durham, North Carolina, described temperature regulation of the African ostrich, which is the largest living bird, and is often exposed to high ambient temperatures. The measurements were made in a 100 kg ostrich. The normal cloacal temperature was about 39.3° C and remained unchanged even at 52° C ambient temperature. At the low ambient temperature the respiratory rate was about five (5) breaths per minute and at about 25° C it increased to 45 breaths/min

without any intermittent rates. The rate did not increase as ambient temperatures were further increased to 51° C. The respiratory evaporation of water increased proportionally with the increasing ambient temperature. Since respiratory rate was set at five (5) breaths/min at low temperature and 45 breaths/min at high temperature they concluded that the increase in respiration was achieved by increasing tidal volume. The O_2 consumption was approximately 450 ml/min and this did not change as a function of ambient temperature between the range of 20 to 45° C.

C. P. Luck and P. G. Wright from Uganda, Africa, described the temperature regulation in African elephants and they attributed the controlling source of heat loss in Loxodonta africana was via the circulation in the pinna. In these animals the arteries and veins of the pinna are large, spaced alternately with wide separation and connected to a dense capillary bed. The animal uses its ears like fans and they are in almost constant motion. The skin over the ear surface was thin but no sweat glands could be found. Using the dye dilution technique the cardiac output and ear blood flow were measured in immobilized animals and the ear blood flow was found to be a significant fraction of cardiac output.

In the section of exercise and fatigue K. Wasserman and his associates from Palo Alto, California reported a test to evaluate the physical fitness at three different levels of work loads, using a bicycle ergometer. Each subject's "anaerobic threshold" was determined on the first day. The second day the subject exercised at three work loads, one work load below the "anaerobic threshold" and a second (heavy) and a third (very heavy) work load above the "anaerobic threshold", for 50 minutes or less. They found that a steady state in oxygen uptake during constant load exercise did occur at different times in three levels of work. The time required to reach a steady state was related to the severity of exercise. Thus at work loads below the "anaerobic threshold" (oxygen consumption was 1500 ml/min), oxygen consumption reached a steady state in less than four minutes. At very heavy work loads (oxygen consumption approaching 2700 ml/min), oxygen consumption did not reach a steady state even after 15 minutes of exercise.

T. Ishiko of Tokyo, Japan, presented a study of application of a telemeter to the analysis of rowing movement. The author used a telemeter for the recording of pulling strength of oar and kicking strength of stretcher by attaching strain gauges, simultaneous with the recording of acceleration of boat. In this device the pulling strength amounted to 60-100 kg and Japanese crews exerted weaker force compared with German and American crews during the Tokyo Olympics. However, there was a large individual variation among subjects on pulling strength as well as personal difference among each subject. S. Ikawa and his associates reported the effects of serum enzyme values during strenuous exercise. They observed elevation of SGOT in young sportsmen after strenuous and prolonged exercise (20 km road race) and after all-out test on treadmill or running (5,000 m and 10,000 m). The activities of their SGOT, LDH, creatine phosphokinase were all elevated during physical exertion.

H. Ikegami of Tachikawa, Japan, presented his study on "post-hypoxic" oxygen syndrome. He observed that the oxygen inhalation after hypoxia produced sometimes unconsciousness or cramps. The oxygen inhalation after hypoxia produced by altitude chamber of low oxygen gas mixture caused dizziness, lightheadedness or disturbance of consciousness in human subjects. Specific visual color images were commonly observed in this period accompanied by arousal pattern of EEG. Also oxygen inhalation after hypoxia produced tonic cramps in rabbits with arousal EEG. In the oxygen inhalation after hypoxia produced an increase of carotic blood flow with decrease of carotic blood pressure, suggesting marked decrease in cerebrovascular resistance. Air inhalation instead of oxygen in all experiments described above showed similar results but in milder degree. He speculated that the change in cerebral hemodynamics probably played important roles in this syndrome.

The scientific sessions were held at the National Education Center and Niseikaikan. The majority of papers were presented in English but there were occasional papers presented in French. The projection system and acoustics were generally satisfactory. This is the first time the Congress was held in the Far East and the next Congress will be held in Washington, D.C. in 1968.

THE "CHLORIDE SHIFT" IN SEVERE CHRONIC PULMONARY DISEASE



Nathan S. Kolins, M.D.

In order to better understand the treatment of chronic obstructive pulmonary disease one should be versed in the fundamental changes occurring in the blood gases and electrolytes. The so-called "chloride shift" is an important facet in this problem.

HYPERCAPNIA and respiratory acidosis are terms frequently used interchangeably since widespread pulmonary function testing. Only recently have the two terms been separated and more rigorously defined. Acidosis and alkalosis are simply and completely defined by the pH of the arterial plasma. The normal range of arterial pH is between 7.35 and 7.45. Regardless of what factors are operating, a pH below 7.35 is considered acidosis and one above 7.45 alkalosis.

Tucson, Arizona
Presented at the American College of Physicians Meeting, Tucson, Arizona December, 1965

In pulmonary disease of chronic character, the resultant pH is made up of respiratory and metabolic factors. These may cause pH changes to vary in the same or opposite directions. In the absence of renal or diabetic disease, the range of arterial plasma pH is determined mainly by the CO_2 and bicarbonate content of the plasma. The quantity of these substances depends on the respiratory and renal function.

With the use of arterial puncture for the determination of pH, pCO_2, and oxygen saturation of the plasma, the surprising finding of alkalosis or a pH above 7.45 in relatively severe pulmonary disease has required a new look at

the problem of acid-base balance. With a pCO_2 at or above 40mm Hg and a pH above 7.45, the assigning of — quote "overcompensation by a metabolic alkalosis" is an oversimplification of a chronic and profound process. The purpose of this paper is to present a modus operandi of the production of alkalosis and a physiologic method of treatment of this dangerous condition.

In chronic pulmonary disease, frequently the final common pathway is hypoventilation with the production of hypercapnia with or without oxygen desaturation. Hypercapnia, by definition, is the result of hypoventilation.

With increasing tensions of CO_2, the pH drops, as described in the Henderson-Hasselbalch equation.[1] (Figure 1)

$$7.4 = 6.1 + 1.3 \text{ (normal)}$$

$$pH = pK_1 + \log \frac{(HCO_3^-)}{H_2CO_3}$$

$$\text{meq. } H_2CO_3 = 0.03\, pCO_2 \text{ in mm Hg.}$$

Figure 1

0.03 represents a proportionality constant between dissolved CO_2 and pCO_2.[2] Using this figure pCO_2 is convertible numerically to H_2CO_3. In hypercapnia the ratio of bicarbonate to carbonic acid falls from its usual 20:1, and so the pH falls.

This, then is hypercapnia and respiratory acidosis, as we usually see it. If the excess CO_2 can be blown off by hyperventilating, for instance, by means of a mechanical ventilator, then no further serious changes will ensue.

However, in the case of a chronic hypercapnia, marked changes do occur. The first act is the renal response to a lowered pH. There is an increased urinary excretion of H ions and an increased reabsorption of bicarbonate ions.

This is the start of a metabolic alkalosis, that tends to compensate for the pre-existent acidosis, i.e. (of respiratory origin). Along with the loss of H ion and the reabsorption of bicarbonate, there is a concomitant loss of Cl ion in exchange for the bicarbonate. The net effect of these events is a rising pH, an increase in serum bicarbonate and a fall in serum chloride. In cases of mild hypercapnia, these changes occur, but are of low magnitude and the three parameters measured above tend to stay just inside the normal range. In more severe cases, higher levels of carbon dioxide retention are accompanied by high values of serum bicarbonate and markedly reduced serum chloride.

To add to the aberration in serum electrolytes, these patients with chronic pulmonary disease often have poor appetites with poor food intake and a strict interdiction of sodium chloride intake. In addition, these patients frequently are on a routine of mercurial or-thiazide diuretics as well as the chronic use of corticoids, all measures causing a further fall in chloride levels. It is this change, this fall, that we call "The Chloride Shift." The end result is a marked fall in chloride, together with a chronic fall in potassium and a slower fall in sodium. This picture is, then, further complicated by the use of mechanical respirators which cause a fall in pCO_2. The result is a hypochloremic, hypokalemic alkalosis. Acid-base and electrolyte studies will then show a pH above 7.45, a potassium at the lower levels of normal or below, and a definitely reduced chloride content of the plasma. (Figure 2)

pH -----> 7.45

Potassium ---- low normal or below

Chloride ---- definitely reduced

Bicarbonate--- definitely increased

Figure 2

The classic experiments of Schwartz[3] clearly demonstrate in dogs the adaptation to hypercapnia by the electrolytes, and the changes in these electrolytes when the hypercapnia is remedied. Here the high pCO_2 resulted from the dogs residing in an environment with high levels of CO_2. Recovery from hypercapnia was effected by removing the animals from that atmosphere into everyday air. The dogs had been divided into high and low salt (NaCl) intake animals before and during the experiment. On return to air breathing, the dogs which had been on a high NaCl intake quickly recovered a normal pH, in contrast to the low chloride dogs. Potassium levels appeared unchanged in the three periods, before, during, and after the exposure to high levels of CO_2. Careful balance studies showed the main influence to be in the chloride moiety, with marked losses during the CO_2 breathing phase. These losses could only be made up by supplying large quantities of chloride, regardless of the *cation* of the salt used.

The hypochloremic, hypokalemic alkalosis contributes at best to the downhill course of the patient, and at the worst, can be catastrophic. Relman[4], studying alkalosis in the muscle cell, concludes, "Alkalinization of the extracellular medium, whether by reduction of pCO_2 or increase of bicarbonate, causes a proportionate alkalinization of the cells. On the other hand, acidification of the medium produced either by a rise in pCO_2 or a reduction in bicarbonate, has no discernible effect on cell pH until a relatively severe degree of acidosis is reached." (Figure 3)

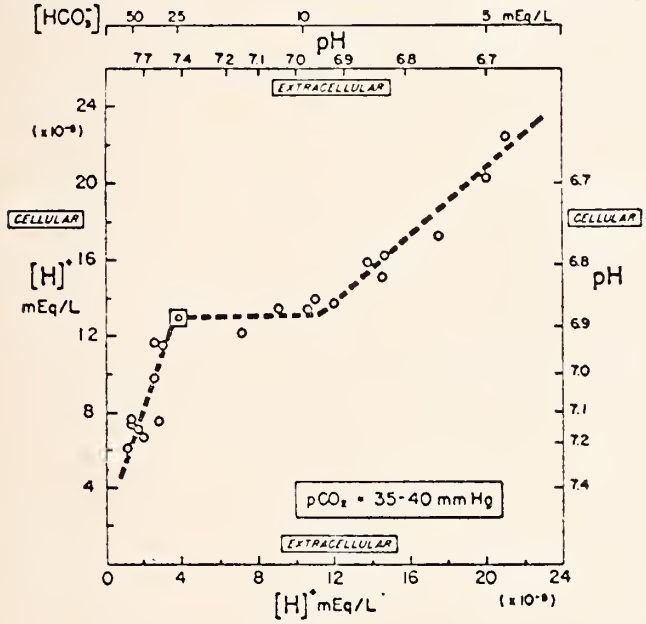


Figure 3

Here, a curve is drawn of intra cellular pH with changes in extra-cellular pH. The pCO_2 is kept constant and bicarbonate and H ion concentration of bathing fluid varied. Intracellular pH stays constant in spite of tripling of H ion concentration, but shows immediate large increase in pH as extracellular hydrogen ion concentration enters the alkalosis zone.

Relman's final conclusion is that "the cell (speaking of muscle), constantly faced with the threat of acidosis, has evolved efficient means to defend itself against external acidity, but is not adapted to meet the stress of external alkalinity." This conclusion stated for muscle cells is true also for the respiratory center, where alkalinity causes loss of its sensitivity with a resulting hypoventilation. In addition, with the plasma and blood pH on the alkaline side, the O_2 dissociation curve is pushed to the left, and the oxygenated blood is reduced in its ability to give up oxygen to the depleted tissues. After the use of mechanical respirators in moderately severe hypercapnia, there is a lower pCO_2, a greater oxygen saturation of the blood, a slowly increasing hypoventilation, and a reduced oxygen supply at the cellular level.

In treatment, one should suspect this mechanism in a patient, previously cyanotic, who remains ill and obtunded even after good ventilatory function has been reestablished by mechanical respiration. The serum electrolytes will strengthen the suspicion, if the bicarbonate is above the upper normal, and the chloride has shifted to a low value. A check of the law of electroneutrality[5] will assure that we are dealing with a problem of carbonic acid-bicarbonate aberration. (Figure 4)

$$[Na^+] + [K^+] + 7 = [Cl^-] + [HCO_3^-] + 24$$

Figure 4

If the cations exceed the anions by more than 10, one should be alerted to the following possible hidden diagnoses: diabetes mellitus (accumulation of aceto-acetate anion), congestive heart failure or anoxia of any cause or both (accumulation of lactate anion), renal insufficiency (accumulation of phosphate and sulfate anions), and a high concentrations of drugs (usually administered as the soluble sodium or potassium salts). If the cations do not exceed the anions by 10, then the above diagnoses can be discarded for our discussion.

In the presence of hypochloremia with an elevated plasma bicarbonate, arterial gas studies then become essential to understand the problem. If the pCO_2 is close to normal, and the pH at the uppermost levels of normal or above 7.45, then treatment is necessary.

The chloride ion must be presented immediately and in large quantities. Gorlin[6] has suggested the use of intravenous arginine monohydrochloride. This material will reverse the hypochloremia, and at the same time will bring the pH back toward the acid side. However, with the ever present threat of acidosis in the chronic pulmonary patient, the use of an acid salt is indicated only in emergency circumstances. If the situation is not critical, the chloride ion may be supplied as the salts of potassium and of sodium, as potassium chloride in a dosage of a gram four times daily and the free use of sodium chloride in food and in infusion solutions.

It has repeatedly been shown that the use of potassium salts, other than the chloride, will not reverse this situation. Aber[7] used the glutamate, other investigators have used bicarbonate or citrate salts of potassium with little or no effect, either on the acid-base balance, on chloride level or on the potassium level itself. We have used liquid solutions of potassium chloride, which are in themselves a miserable potion to swallow. However, with doctoring with various syrups, the solution becomes, if not palatable, at least possible to get down.

In regard to the sodium salts, the free use of sodium chloride is unlikely to cause any difficulties. Usually the serum sodium is depressed below normal. If, as the condition that necessitated the use of chloride salts recedes, the sodium level starts climbing to higher than normal levels with beginning edema, then the use of mercurial diuretics becomes effective again, in the presence of adequate chloride ion. However, Leaf[8] says, "A high intake of sodium does not normally produce hypernatremia. It does create a state of expanded extracellular-fluid volume, which increases glomerular filtration rate and inhibits secretion of aldosterone — conditions highly favorable for excretion of excess salt load. In fact hypernatremia is frequently associated with renal conservation of sodium. This occurs when reduction of extracellular-fluid volume attends the water deficit causing the hypernatremia and results in some decrease in glomerular filtration rate and stimulation of aldosterone output."

After supplying a sufficiency of chloride ion, next in the therapeutic routine, is the use of drugs to reverse the renal tubular reabsorption of bicarbonate. The administration of a carbonic anhydrase inhibitor suppresses all the reactions, which depend on a readily available supply of hydrogen ion. These agents promote the increased excretion of sodium, potassium, and bicarbonate, and decrease the rate of excretion of titrateable acidity and ammonia.

Carbonic anhydrase inhibitors have been used frequently in the past in chronic pulmonary disease with variable and unpredictable results. Although not uniformly successful, some patients have improved with the use of these agents. Often the observed data are not sufficiently consistent to permit certainty as to the precise sequence of events by which it was effective.

However, a reasonable working hypothesis suggests that the first event is an augmented excretion of bicarbonate in the urine, leading to a decrease in the concentration of bicarbonate in the extracellular fluids. This change would dictate a fall in pH. If this latter were successful in stimulating an increase in respiratory activity with an augmented excretion of CO_2, the pH would be restored toward normal and the pCO_2 would be diminished. Christensen[9], using dichlorphenamide or darenide, a potent carbonic anhydrase inhibitor, suggests the following mechanism: (1) blocking the reabsorption of bicarbonate from the renal tubules, (2) a parallel natriuresis, an osmotic diuresis, and a fall in extracellular pH, and (3) the low pH would then provide a respiratory stimulus distinct from that due to CO_2 retention. In other words, these drugs produce their respiratory effects by inducing a metabolic acidosis.

Gilman[10] reasons, "In a bicarbonate-loaded subject, the inhibition of carbonic anhydrase would reduce H ion transport directed toward bicarbonate reabsorption by 1000 micro eq./min. It is for this reason that the individual with a nomal bicarbonate load is responsive, and an individual in metabolic acidosis is refractory to the diuretic action of carbonic anhydrase inhibitors." There is a built-in safety factor in these drugs; as a metabolic acidosis appears, the effectiveness of the carbonic anhydrase inhibitors wanes.

To summarize — a number of patients with severe chronic pulmonary disease, will go through the following phases: the hypoventilation gives rise to carbon dioxide retention with increasing pCO_2. The respiratory acidosis resulting, is followed by increased renal excretion of H ion and the obligatory reabsorption of bicarbonate and the streaming out of chloride ions. Now, a metabolic alkalosis tends to minimize the effects on pH of the respiratory acidosis. Next, the use of mechanical respirators causes an increased ventilation with loss of carbon dioxide and a rising pH. The end result is a hypochloremic alkalosis.

This dangerous condition can be recognized by the high bicarbonate fraction and the low chloride in the serum electrolyte studies — the chloride shift. The suspicion can be confirmed by arterial pH above 7.45 and a pCO_2 in the 40 or 40 plus mm of Mercury range.

Treatment consists of the presentation of large amounts of chloride in the form of the sodium and potassium salts to the patient and the use of carbonic anhydrase inhibitor drugs. I use diamox in the dosage of 250 mgm. one to three times a day. Once the progression of the hypochloremic alkalosis is stopped and then reversed, there is an immediate improvement in the patient's condition. There is no need to use dangerous quantities of chlorides or drugs, for once the condition is recognized, surprisingly little treatment goes a long way. Chemico-physical improvement is monitored by repeated estimations of arterial pH and serum chlorides.

This, of course, is but one facet of the total treatment of the chronic pulmonary patient, but one, if neglected, that can have dire consequences for the patient.

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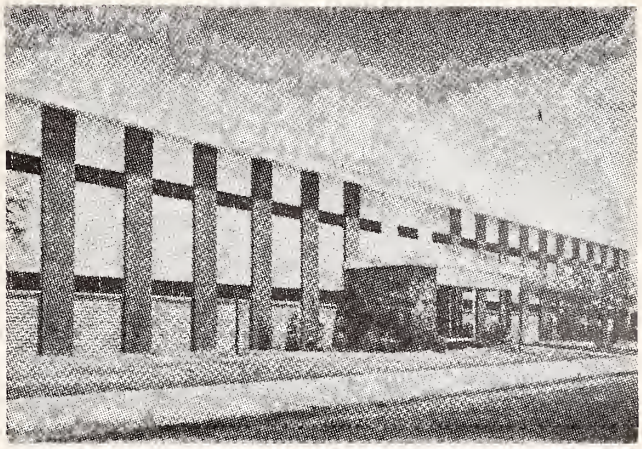
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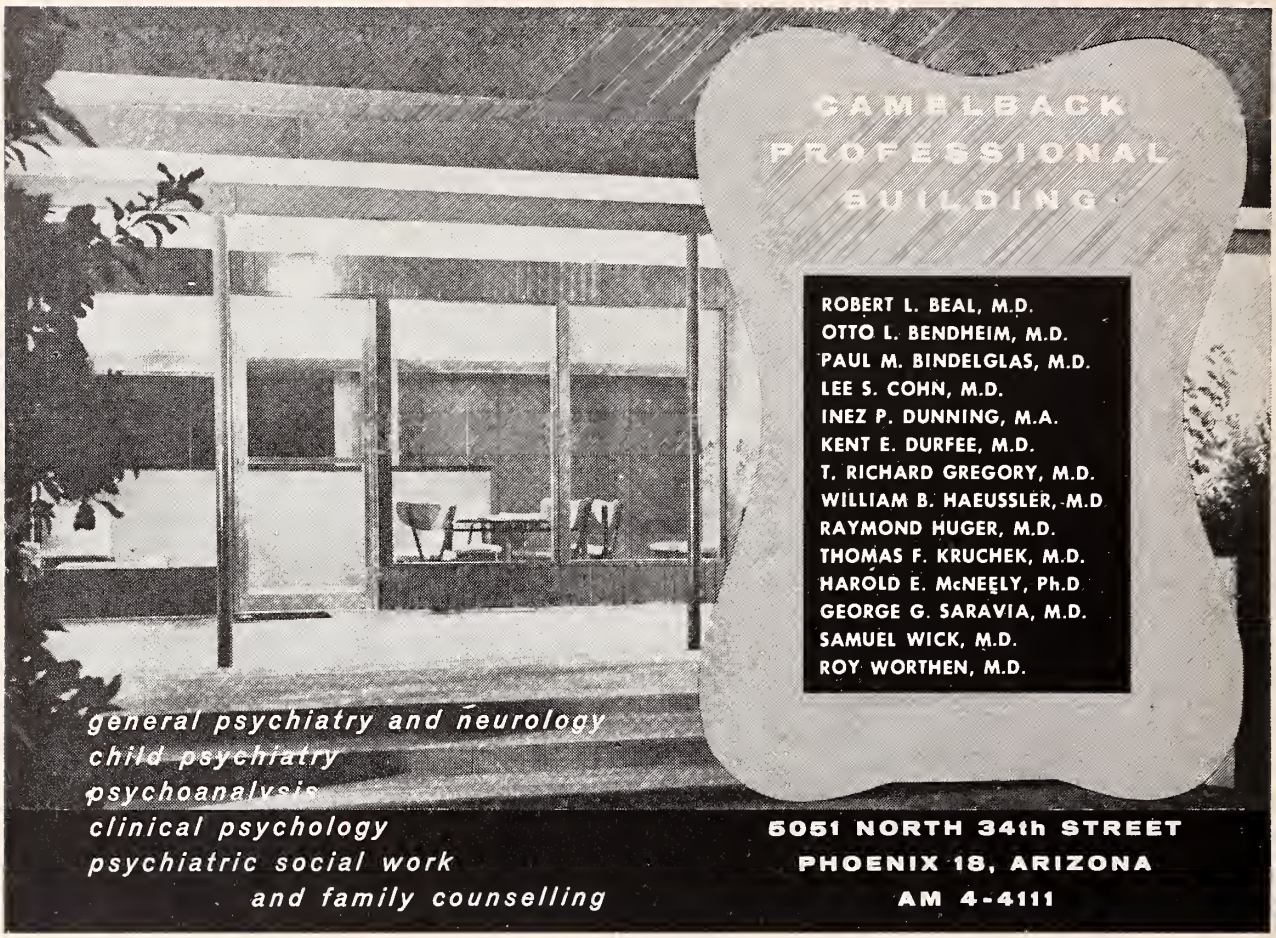


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Paul B. Jarrett, M.D.

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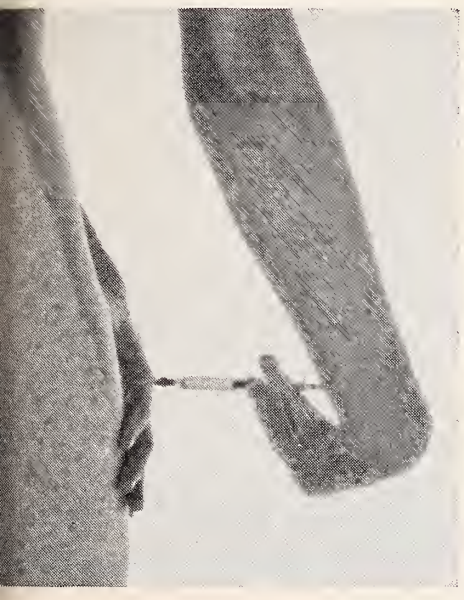


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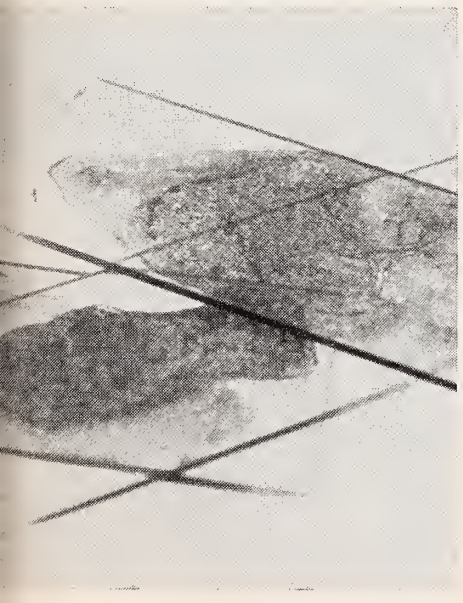
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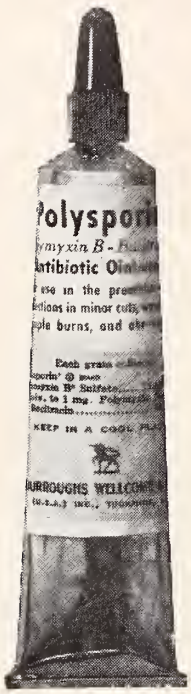
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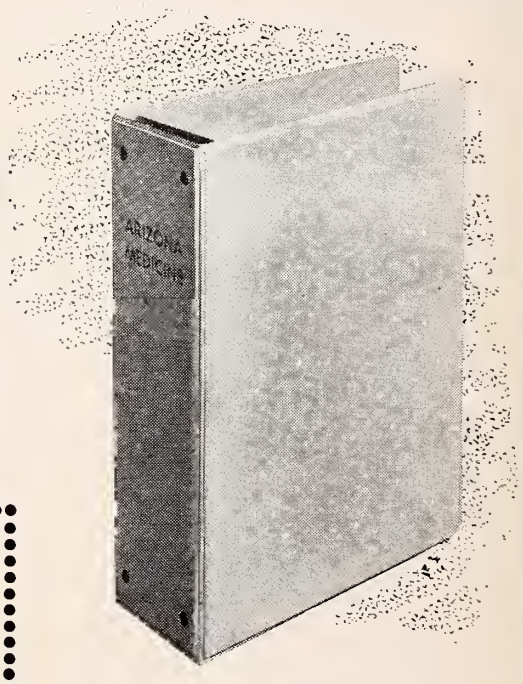
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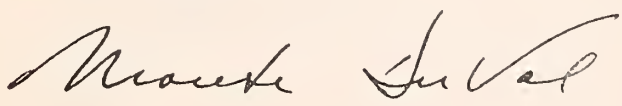
Recently, in a consideration of curriculum design, we indicated that several decisions were necessary before we could implement our program. The first of these was that our basic science teaching would be inter-disciplinary. We had to make that decision at a very early date so that we could proceed with the functional design of the Basic Medical Sciences Building. Laboratories of this type are complex and expensive, although they actually represent less of an investment than that which is required for traditional laboratories (remember that one multidiscipline laboratory serves all the basic science disciplines, while the traditional pattern calls for a laboratory for each of the six disciplines). Because of this, we visited several medical schools where one variety or another of multidiscipline laboratory has been brought into existence and we read every written description that was available to us on this subject. With the help of our architects, we then translated our findings into a laboratory which we believe will meet our particular requirements.

Our first concern was that certain philosophical precepts should be recognized prior to executing the design itself. Among these were the following: the laboratory must be primarily oriented toward the student even while satisfying the requirements of each of the basic science disciplines; the laboratory space must be flexible enough to permit future innovations in teaching techniques and curricular patterns; each student should have available a "stand-up" laboratory and a "sit-down" study area where he will be able to perform the learning exercises required of him. The general area must also be large enough to permit certain activities such as demonstrations, small group conferences and lectures, meanwhile promoting effective contact between faculty and students. In order to insure the "home base' theme, each student should be provided with storage space for his own microscope, books and equipment as part of this laboratory facility. The "home base" should be accessible to student occupancy 24 hours a day, thereby making the opportunity for either individual or group study and interaction physically unlimited.

It was our Professor of Anatomy, Dr. Philip Krutzsch, who successfully translated these precepts into a workable design. He did it as follows. First, he started with a unit which provided work-space for four students. This work-space included both "stand-up" and "sit-down" capability and also provided the storage space alluded to carlier. Then, four of these units were combined into a single, 16-man laboratory. Two of these were then aligned so that an "inter-laboratory" area could be created which would serve both labs as an area for the housing of large and expensive equipment which might otherwise have to be duplicated. By locating two such complexes on one floor of the building, it was possible to house the entire class of 64 students together, and then add the additional, supporting facilities such as conference rooms and lecture hall adjacent to the student laboratories. This entire complex was then duplicated on the second floor so that two full classes of 64 students could be accommodated.

Throughout the considerations which underlay the design of these laboratories was that which pertained to the role of gross anatomy. There was never any doubt that the requirements of physiology, biochemistry, pharmacology, microbiology and pathology could be met with this approach. However, gross anatomy posed a few, particular problems. At least one medical school does house its gross anatomy programs in a multi-discipline laboratory but their experience includes enough reservations that it persuaded us to encompass gross anatomy separately in our design.

The entire suite of eight laboratories with their inter-laboratories will be controlled, supplied and maintained by a Director. Such management not only assures the accurate operation of equipment, distribution of supplies and pretesting of experiments, but saves much student and faculty time as well. The Director will also serve as a pedagogical link between the various scientific disciplines.




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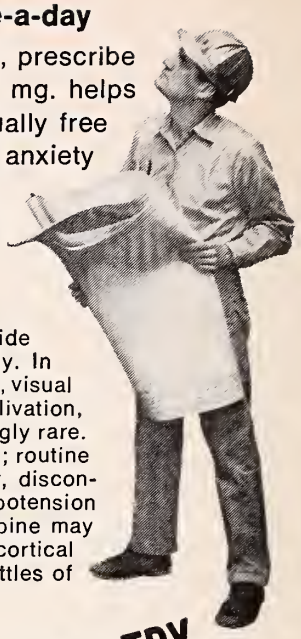
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MEDICAL ETHICS

"The moral principles, quality, and practice of that science and art dealing with the prevention, cure, or alleviation of disease."

On this June morning, A.D. 1966, let us offer two groups of words which may be found in the dictionaries on the desk of any physician, as well as on the desks of both the heads and functionaries of Government. The words are:

Dignity, integrity, respect, honesty, devotion, duty, and accomplishment.

Subterfuge, chicanery, procrastination, mediocrity, avarice, status, and jealousy.

The words are applicable both to individuals and to groups; both to the Profession of Medicine and to the Government.

The words and their grouping actually delineate and indicate two courses of action; two philosophies; two roads to travel. They will certainly be factors in the ultimate evaluation of Public Law 89-97.

We possess a great heritage. Let us neither forget, ignore, nor dishonor it.

Roland F. Schoen, M.D.
Editor

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Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, double-spaced, on one side of the paper only, and the original and a carbon enclosed.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.
4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
5. The Journal reserves the right to edit all material.
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Flagyl seeks out the sites where trichomonads hide. Only a systemic agent can. Only Flagyl does, selectively and effectively.

Flagyl destroys trichomonads in the inner crypts, glands and cavities of the genitourinary tract in both women and men. Consequently, Flagyl is capable not only of curing trichomoniasis in women but also of preventing reinfection.

Correctly used, with due attention to repeat courses of treatment for resistant, deep-seated invasion and to the presumption of reinfection from male consorts, Flagyl has repeatedly produced up to 100 per cent cure in large series of patients.

When the diagnosis of trichomoniasis is positive, Flagyl is positive.

Dosage and Administration—*In women:* one 250-mg. oral tablet three times a day for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When the inserts are used one vaginal insert should be placed high in the vaginal vault each day for ten days, and concurrently two oral tablets should be taken daily.
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Contraindications—Pregnancy; organic disease of the central nervous system; evidence or history of blood dyscrasia.

Precautions and Side Effects—Complete blood cell counts should be made before and after therapy, especially if a second course is necessary.

Infrequent and minor side effects include: nausea, unpleasant taste, furry tongue, headache, darkened urine, diarrhea, dizziness, dryness of mouth or vagina, skin rash, dysuria, depression, insomnia, edema. Elimination of trichomonads may aggravate coexisting moniliasis.

Dosage Forms
Oral—250-mg. tablets. Vaginal—500-mg. inserts.

SEARLE *Research in the Service of Medicine*

MABEL INDIA ADAMS
1887-1966

At the time of her death early this year, Dr. Mabel India Adams held the distinction of being the oldest practicing anesthesiologist in Phoenix. She was respected by surgeons and anesthesiologists alike as a person competent in her chosen field, and one whose special attribute was keen clinical judgment. In January of 1964, she was awarded a plaque by the Phoenix Society of Anesthesiologists, and is the first person to have been so honored. Two years earlier, in 1962, she was elected to membership in ArMA's 50-year Club. Actively engaged in the practice of medicine until a few months prior to her death, she maintained her high standards throughout a medical career of 53 years.

Contrary to the rumor which would have her born in India because of her middle name, the Board of Medical Examiners lists Dr. Adams' place of birth as Fontanelle, Iowa, on November 11, 1887. She received her medical degree from the College of Medicine of the University of Illinois in June, 1912. Following her graduation, she practiced for brief periods in Chicago, Illinois; Kendallville, Indiana; and Cherokee, Iowa.

Arizona license #804 was granted by examination to Dr. Adams on September 4, 1920. Her purpose in coming here was to provide appropriate anesthesia for the operating skills of the early Phoenix surgeon, E. Payne Palmer, Sr., at whose request she made the move to Arizona. She remained in Phoenix from 1920 until 1924. She married an attorney by the name of Gerard in 1922 or 1923; and a son, Robert, was born of this union. Robert Gerard, whose rank is unknown to this reporter, is said to be serving with the Intelligence Service of the United States Air Force, and is currently stationed with his wife and four children in France.

This tribute to Dr. Adams would be woefully inadequate without a reference to her stature as a person. One who loved the out-of-doors, she was highly regarded by all who knew her. She was an excellent horsewoman, and immensely enjoyed riding her favorite horse, "Pitty-Pat," along Central Avenue's bridle path. For many years, she owned a Tennessee Walker which she named "Lady Smada," reversing the letters in "Adams" to obtain it. She also loved dogs, owning and showing several during her lifetime. She was a charming hostess, whether receiving guests in formal dress in her living-room or in levis and blouse in her tack-room at the house on Bethany Home Road. It was characteristic of her that she always manifested deep and sincere concern for people.

Returning to Arizona in 1942, Dr. Adams applied for membership in the Maricopa County Medical Society. (Note: There is no information in the Maricopa County Medical Society's file concerning Dr. Adams' first sojourn in Phoenix, since the Society was non-existent at that time. It is of interest that the Society was incorporated in 1931; and that of the three incorporators, one, Dr. Joseph Madison Greer, is still very much alive and active in medical affairs. The other two incorporators were Dr. W. Warner Watkins and Dr. Victor Randolph. The officers of the Society when it was incorporated were E. Payne Palmer, Sr., President, and W. Warner Watkins, Secretary.) Dr. F. C. Jordan and Dr. L. B. Baldwin, serving as the Society's Board of Censors, put the stamp of approval on Dr. Adams' application in 1944; and she remained a member in good standing from then on.

MURLIN NESTER, M.D.
1906-1966

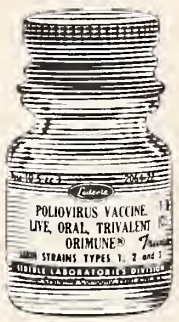
Dr. Murlin Nester died in Tucson 16 February, 1966, of terminal pneumonia, following a cerebrovascular accident, after a prolonged illness.

He was born 5 February, 1906, at Marysville, Kansas, graduated from Madison College in Madison, Tennessee, and obtained his medical degree from the college of Medical Evangelists in Los Angeles in 1936. His internship was at the Nashville General Hospital and he practiced in Marysville and Lawrenceburg, Tennessee, before coming to Tucson in 1956.

Membership in the American Medical Association, Pima County Medical Society and Tennessee State Medical Association was not accompanied by political ambition since he was too busy caring for his many patients who will long remember him for his untiring devotion.

The south side of Tucson has lost a good friend as well as a physician.

Doctor...two important Lederle products for routine office procedures

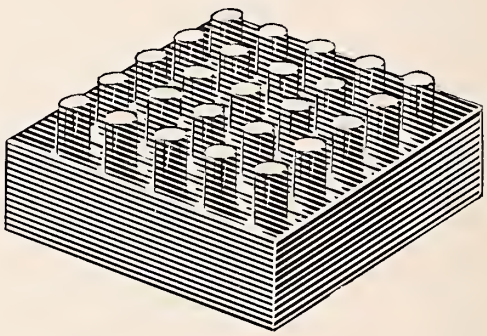


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Effectiveness—may be expected to confer active immunity against all three types of poliovirus infection in at least ninety percent of susceptibles only if given at full dosage, as directed. No characteristic side effects have been reported. There are, however, certain contraindications. These are, broadly: acute illness, conditions which may adversely affect immune response, and advanced debilitated states. In these, vaccination should be postponed until after recovery.
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Dosage—initial immunization: two doses each given orally at least 8 weeks apart. (Give a third dose to infants at 10-12 months). Booster immunization: one dose, given orally. See package literature for full directions.



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*Rosenthal, S. R., Nikurs, L., Yordy, E., and Williams, W.: Scientific Exhibit Presented at the Annual Meeting of the National Tuberculosis Association, Chicago, Illinois, May 30-June 2, 1965.

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Dr. Van Epps

Van Epps Re-elected To The Presidential Chair

Charles E. Van Epps, M.D., Phoenix, was re-elected president of Arizona Blue Shield at the annual meeting. This will be his third term as president of the non-profit medical plan. Other officers re-elected were James L. Grobe, M.D., vice president; Neil C. Alden, M.D., secretary; E. N. Holgate, First National Bank, treasurer; and Noel G. Smith, M.D., executive committee member, all from Phoenix.

W. E. Bentley, apprenticeship coordinator for the Ironworkers, Phoenix, was newly elected to the board of directors.

Re-elected to the Blue Shield board were the following: Miguel A. Carreras, M.D., and Donald F. Griess, M.D., both from Tucson; E. N. Holgate and Charles E. Van Epps, M.D., Phoenix; and Albert J. Ochsner, II, M.D., Yuma.

Arthur C. Stevenson, M.D., Phoenix, was re-elected honorary board member. Dr. Stevenson has the distinction of being the only one so honored in the plan's history. He is a past president of the National Association of Blue Shield Plans.

Re-elected to the professional committee were William E. Crisp, Jr., M.D., Richard W. Creasman, M.D., and Charles E. Henderson, M.D., all from Phoenix; and Seymour I. Shapiro, M.D., Tucson.

Van Epps pointed out that since the plan was originated in 1947, it has paid $38,552,986.31 for the care of Blue Shield subscribers. The 1965 total payment was $4,776,911.80 out of an income of $5,450,323.76.

Van Epps stated additionally that over 1,500 physicians in Arizona participate in Blue Shield in all parts of the state.

Something Borrowed — Something Blue (Shield)

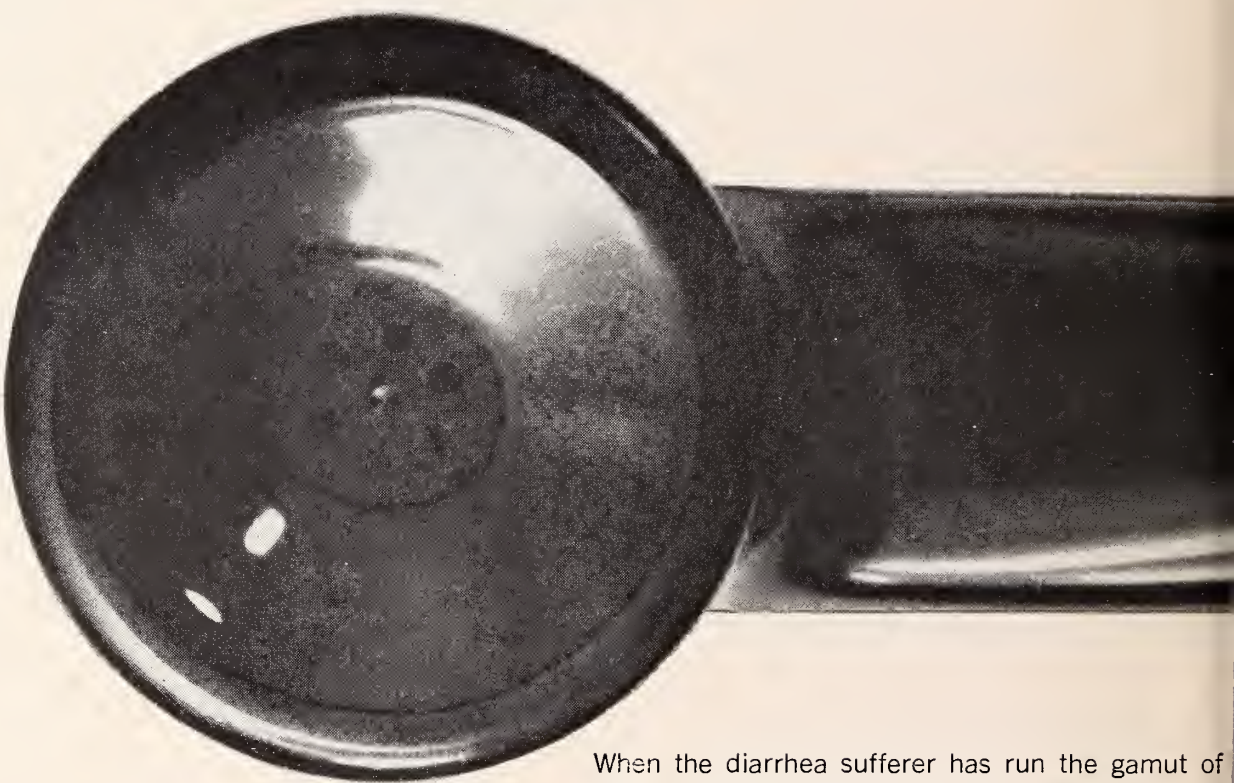
Unity with member plans and cooperation with the medical profession were urged by the chairman of the board of the National Association of Blue Shield Plans at their annual business meeting in Chicago.

Russell B. Carson, M.D., Fort Lauderdale, Florida, said that under the present makeup of Congress, government will attempt to "take over as much of the health care picture as it can. The only deterrent is a united and strong medical profession and its fiscal right arm — Blue Shield."

"If we ever needed unity," Dr. Carson declared, "it is now. There is no place for the 'independent operator' in the medicare program if we expect to have any strength."

Dr. Carson urged that each plan consult constantly with its sponsoring medical association. "It is beyond my comprehension," he said, "that it is improper, unpolitical and out of protocol for there to be any communication between a Blue Shield organization and the presumed sponsors of our respective plans."

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When the diarrhea sufferer has run the gamut of home remedies without success, pleasant-tasting CREMOMYCIN can answer the call for help. It can be counted on to consolidate fluid stools, soothe intestinal inflammation, inhibit enteric pathogens, and detoxify putrefactive materials — usually within a few hours.

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WARNINGS: Use only after critical appraisal in patients with hepatic or renal damage, urinary obstruction, or blood dyscrasias. Fatal hypersensitivity reactions and blood dyscrasias reported with use of sulfonamides. Consider periodic blood counts, hepatic and renal function tests during intermittent or chronic use.

PRECAUTIONS: Succinylsulfathiazole: Use with caution if there is history of significant allergies and/or asthma. Continued use requires supplementary vitamins B_1 and K. *Neomycin:* Watch for

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curare-like neuromuscular block during anesthesia if neomycin is used preoperatively in large doses when renal function is poor; watch for overgrowth of nonsusceptible organisms. Consider possibility of ototoxicity and nephrotoxicity with prolonged high dosage.

SIDE EFFECTS: As with all sulfonamides: Headache, malaise, anorexia, G.I. symptoms, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, rash, conjunctival and scleral injection, petechiae, purpura, hematuria, and crystalluria have been noted. Reduced fecal output of thiamine and decreased synthesis of vitamin K have been reported. *Neomycin:* Nausea, loose stools.

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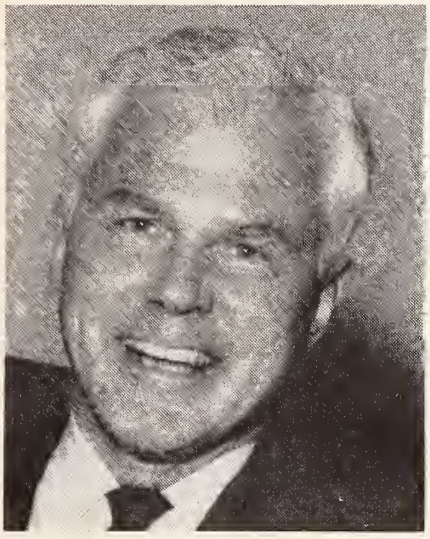
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Anticipating Community Relationships



Merlin K. DuVal, Jr., MD

OUR consideration of the future of medical education has properly centered on the new medical school, its relationship to its parent university, and the products we can expect it to turn out. However, I am secretly glad that we did not stop there, and that we have allowed a few additional moments to reflect on a quite different aspect which the new medical school presents, namely, the impact which it can be expected to have on the community in which it is to be located. I am learning rapidly that this is not a minor consideration, and more than once I have been tempted to suggested that the safest way to anticipate the community relationships of a new school of medicine is from the sun deck of a cruise ship in the south Pacific Ocean. However, since we can expect very little from this approach, I will try instead to offer a few other suggestions.

In general, bringing in a new graduate school does not require a great deal of community preparation. Since the requirements of a profession include the creation of new knowledge and the forwarding of its cumulative skills into succeeding generations through appropriate professional schools, we have become accustomed to having many such schools on our university campuses. Why then is medicine different? It is different because in order to be taught, it must be practiced. And if it is to be practiced, then it must compete with the very students it has trained, often on unequal terms, while simultaneously drawing on many of the same resources which also sustain its competition.

This should not be interpreted to mean that the problem of anticipating community relationships is limited to an accommodation to the problems of the practicing members of the profession, although we may concede that some of our most difficult situations will occur in this area. I will touch on some of these shortly. First, however, there are at least two other factors which deserve a great deal of attention early in the planning stages. These are "city" factors and "hospital" factors. Although the degree of their respective involvements may vary considerably, depending on the size of the city in which the medical school is going to be developed, whether the school is to be tax-supported or privately endowed, and whether or not there is already a medical school elsewhere in the same vicinity, they are nevertheless universally present.

Consider, for a moment, some of the "city" factors. The school's physical plant will require power, utilities, and the disposal of various wastes, some of which may be radioactive. Its location will affect zoning, the flow of traffic, and the residential and commercial interests of its closer neighbors. Its presence may unbalance

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From the University of Arizona College of Medicine, Tucson, Ariz.
Read before the 61st annual Congress on Medical Education, sponsored by the AMA Council on Medical Education, Chicago, Feb. 7, 1965.

existing city transit systems and increase police and security problems. In other words, its arrival is probably going to cost the city some money while simultaneously causing the removal of a substantial piece of land from the property-tax rolls, rather like a deannexation program in which services to the deannexed area may actually require augmentation.

And what about the hospitals? Their operation is almost never a particularly efficient business at best. The sudden intrusion of a college of medicine into the community in which they are located can create an aura of very real concern among people who are involved in their operation. The existence of a college of medicine invariably attracts new patient material to the community. Since this is in addition to the normal community requirement for hospital beds, the number of beds in the community must necessarily increase — and it does. This is true irrespective of whether the new beds are owned and operated by the college of medicine or are located in other hospitals.

The usual fear is that opening the new beds will result in a universal drop in occupancy rates and, therefore, a loss of efficiency. However, this is not the real problem. In fact, occupancy rates generally tend to remain stable because of the increase in the number of persons hospitalized in the community as a result of the opening of the medical school. Instead, the problem arises when we try to provide service to these new patients to the same degree that it has been provided in the past. Unfortunately, such services must come from a pool of paramedical personnel which is usually fixed in size. The result is a period of heightened competition for employee services, the consequences of which can be quite considerable, and may include erratic turnover, hard feelings, wage inequities, and the inevitable increase in daily costs.

Are there ways in which we can help a community prepare itself for the arrival of a new college of medicine relative to these "city" and "hospital" factors? I think so. But make no mistake about it, it requires work — work which is quite apart from the more pleasurable academic considerations such as accreditation, curriculum, or research programs. One of my friends recently reminded me that the road to success would be smooth as long as it was paved with good intentions. In the area we are discussing, I am suspicious that the road to success will always be under construction. However, experience is accumlating, and there is every reason to believe that we can learn from it if we are willing to do so.

For example, the arrival of a college of medicine represents a very substantial asset to any community. It is a blue chip investment which pays off in dividends much beyond anything which can be estimated in advance. The design and construction of the physical plant provide many jobs, some of which are perpetuated by remodeling, renovation, and growth. Annual operating budgets approximate one-third of the initial capital cost, and 70% of the budget is for labor. An excellent market is created for supplies, equipment, and utilities. Medical-center visitors require gasoline, food, and overnight lodging. Strictly in the commercial sense then, we have a product that is eminently salable to the community in which it is to be located. It is this asset which assists us when we need help with the necessary rezoning and purchase of property, and with the widening of some roads and closing of others. The members of our city councils, our planning and zoning commissions, and our chambers of commerce understand these things. With their help, a smooth arrival of the medical school into the community can be greatly facilitated. However, we must take these people into our confidence early, make them feel a part of our project, and stay with them afterwards. People are surprisingly tolerant of the nuisances and inconveniences our arrival sometimes occasions as long as they are "sold," on the justification for it. If they are to be "sold," then they must be informed. Only you and I can do this.

The challenge which a new medical school presents to the hospitals and other health resources in the community is of a different character. This is no longer a matter of inconvenience or nuisance. The ramifications may be more serious. Of course there is not much evidence that hospitals have actually closed because medical schools opened, except and unless such closures were prearranged between the parties involved. In reality, hospitals have much to gain by the proximity of a medical school and it is the positive aspects of these gains which should be kept in the forefront of all considerations as plans for the new school are made. Community beds may be used for teaching; internship and

residency programs can be inaugurated; teaching conferences can be improved; sophisticated equipment may be shared; additional income will be produced; inpatient hospital research may begin; records will improve; accreditation will be easier. The benefits are too numerous to list in one sitting. Much more important is the fact that the college of medicine is invariably the setting from which will spring new programs of education for ancillary health personnel such as nurses, laboratory and x-ray technicians, physical therapists, and dieticians. Since these people are the working force of the community hospital, their production in increasing numbers is the absolute answer to the provision of bedside service for the increased number of patients which will enter the community.

As with any rich resource, intelligent planning for its utilization and deployment is essential. We have been much too slow to recognize that hospital planning is a community venture, indeed an obligation, of great magnitude. The day of the small, proprietary hospital is fast disappearing and we are becoming increasingly dependent upon a continuing, effective level of community support for our bigger health resources. This support is much easier to mobilize if the community has planned for it, and the establishment of hospital-planning councils in cities all across our nation represents, to my way of thinking, one of the truly fine urban advances of our times. Parenthetically, let me add that the physician has gained much stature in the eyes of his lay brother by his active participation at these council tables. Here the role of the medical school is clear. It should, and usually will, have representation on such councils. However, its participation should be more than cooperative; it should be vigorous and firm, but not selfish. There will be many occasions when its own future may depend upon the active interest and support of this same council. It is much easier to pick up this support if it has been earned.

Three years ago, the Association of American Medical Colleges devoted its tenth teaching institute to the following subject: "Medical Education and Practice." Almost 400 pages of printed material testify both to the thoroughness with which the subject was covered and to the significance with which it is endowed. I would not enter this same arena today, except that one cannot lay the foundation for the development of a new medical school without reference to the primary points over which conflict and misunderstanding occur within the medical profession itself. To distill the myriad of viewpoints which are available on this subject into a working principle is not possible within the confines of this discussion. Instead, let me suggest that the anticipation of relationships between a newly developing medical school and the community of practicing physicians which surround it begins by recognizing the apprehension which most doctors in this setting are going to feel.

This apprehension has many sides and many colorations, and while it varies in its expression from individual to individual, I believe it has a common thread which can be identified. This thread is the awe with which the institution itself is regarded. It is not easy for a doctor to feel compatible with an institution which he holds in such awe. Paradoxically, he basically wants to be near his professional school, is proud of it, and emphatically wants to be a part of it. His apprehension arises first from the fear that he might be left out as its develops, and second from his fear that, if he is included, he will somehow fail to measure up. Both have the same result, namely a threat to his standing among others.

Can we anticipate this area of difficulty and make plans to minimize it? I think so, although just as footprints on the sands of time cannot be made while you are sitting down, neither can you hope to allay fears, erase misunderstandings, or maintain an environment of mutual trust, without making a very substantial effort. These things just don't happen by themselves.

Practicing physicians are invariably reassured if they know that the college of medicine is interested in them as people, and as physicians, and that their contributions to the growth and development of the educational and research programs of the school will be welcomed and encouraged. It has been my experience that many of the most thoughtful members of the profession constitute a gold mine of sound ideas, and they enjoy expressing them. These ideas may range from research projects to nominations for faculty positions, from program emphasis to curriculum innovations. It does not matter what the ideas are. What matters is that they get expressed. Every effort should be made to construct appropriate administrative machinery for

the receipt of these ideas and viewpoints. For my academic colleagues, let me add that this poses no threat whatsoever to the principle that policy and decision-making must reside with the university. No doctor argues this point.

There are, of course, some areas of concern about which feelings will run quite high, and misunderstanding will be rampant. Such problem areas demand the most serious deliberative efforts of both groups. For example, questions which relate to the production of income by salaried clinical faculty are going to be of considerable interest in the community. While it takes but a few moments with a pencil and paper to show that a salaried clinical faculty cannot do much economic damage to the professional community as long as certain basic ground rules are observed, the specter of unequal competition in a game in which both sides may not be bound by the same rules is a formidable one indeed. Experience has shown that this is an area in which advance preparation is worth every ounce of energy and every hour of time which have been invested. Members of the practicing profession who are close to a new medical school are ordinarily very generous in their proposed solutions to these problems provided they are consulted sufficiently early and their views are dignified by a thorough review. If they feel that they have shared in the making of the final decision on such points as the production of income by salaried faculty, they become staunch defenders of the programs which ensue. Naturally, one should not look forward to unanimity of opinion. There are always some men to whom the threat of a good school of medicine is utterly overpowering. There is no compensation for such individuals. Consensus, however, is essential, and it can be achieved if enough spadework has been done.

It is perhaps immaterial how the necessary channels of communication are set up. Liaison committees, advisory groups, and individual counselors all may be effective. The only condition is that they work. In this regard, it is worth remembering that we often think we are in disagreement over specific points when, in fact, we are not. More commonly, we have derived different interpretations from the same data. In human relationships, I know of nothing more dangerous than jumping to a conclusion. It is almost never justified, and is almost always regretted. The quick decision is almost always made in an environment of mistrust, at a time when one is seeking to identify those things which are wrong. Trust and confidence cannot be based on anything other than honesty, and a reputation for honesty must be earned. In this regard, more can be accomplished by an honest conversation between two individuals than by any other device we have yet developed.

Quality medical education is a highly complex commodity to distribute. At this point in mid-century, it requires a joint venture between the university, the profession, and the society that we serve. Within this compact, the individual cannot remain aloof. At the same time, the medical center wields a type of power which is awesome and it must guard carefully its relationships with the community around it if it is to succeed in its mission. Anticipating these relationships makes their definition easier, and is emphatically worth the time and effort it requires.

Under the Rug or Out in the Open?

Obviously there are two schools of thought concerning medical disciplinary problems. The first holds that at least 99 per cent of physicians are paragons of virtue. Members of this school believe that the extremely small number of physicians who are likely to get into trouble should be ignored or at least the dirt should be swept under the rug and not mentioned.

Adherents to the opposite school maintain that many physicians do have human frailties and that their shortcomings are of sufficient importance to cause serious difficulties among a small but important part of the profession. They also are concerned over the fact that they are likely to cause grave damage to a significant number of patients each year. They believe in facing the problem squarely by bringing it out for open discussion in an effort to remedy the situation.

In 1961 Harold E. Jervey, M.D., in his Presidential Address before the Federation[1] estimated that there were 1 to 3 per cent physician offenders within the meaning of the law, in round numbers between 2,500 and 7,500. We leave it to the ingenuity of the reader to decide how many patients are being treated by these "delinquent" doctors each year.

Obviously President Appel of the American Medical Association does not belong to the sweep-it-under-the-rug school. Elsewhere in this BULLETIN he proudly calls attention to the first Annual Congress on Medical Ethics to be sponsored by the American Medical Association and says, "This will be the first time that any major profession publicly has taken an introspective view of itself.

The recent Sunday afternoon program of the Federation indicates that it also believes in facing problems squarely. Three of the four papers dealt directly or indirectly with disciplinary problems and the speakers offered concrete sug gestions to solve them. While we have no desire to flout the sins of the profession publicly, open discussion is healthy and should serve to convince some of the legislative detractors of physicians that we continue to be concerned about our own problems and do not need the particular kind of legislative help that has been recently offered to solve them.

It is noteworthy that representatives of the Press were not barred from the frank discussion of State Board problems and so far as we know they reported the proceedings in a fair, unsensational manner. While we do not advocate an emotional approach to disciplinary matters neither do we recommend denial of the fact that a problem exists.

1. Jervey, Harold E., Jr., M.D.: A Survey of Medical Discipline. Fed. Bull. 48:83-95 (April 1961)

FEDERATION BULLETIN
Vol. 53, No. 3
March 1966

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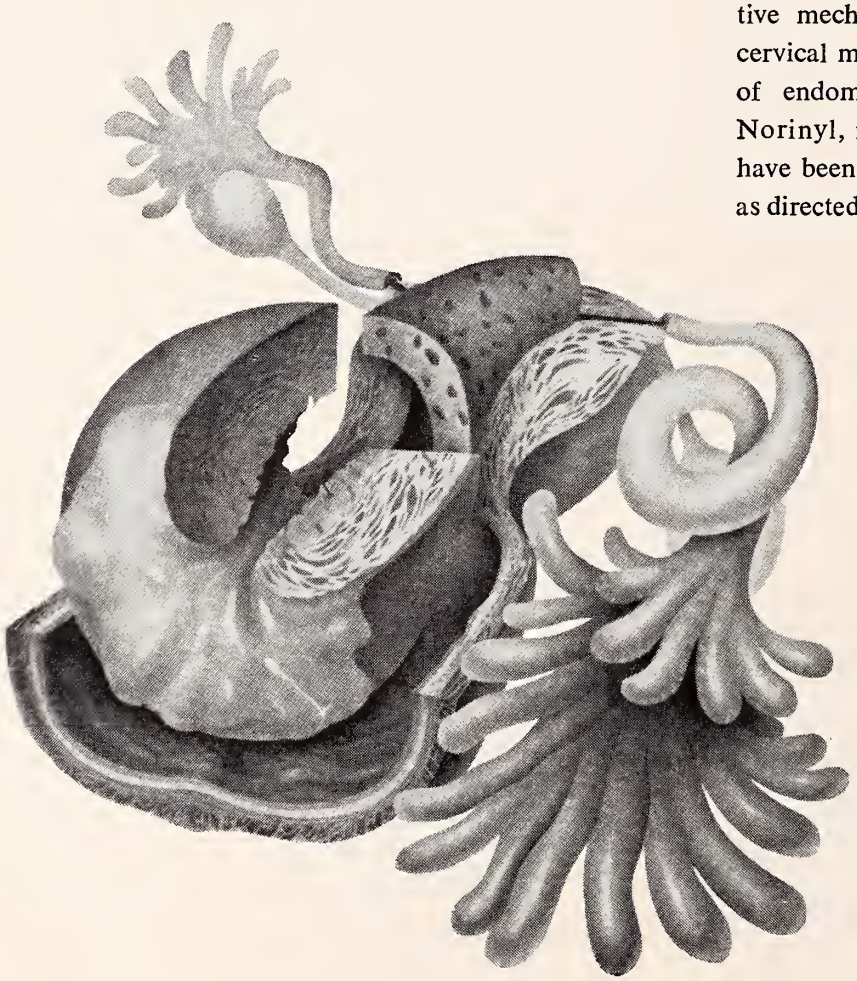
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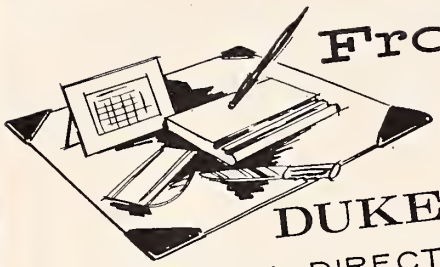


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References: 1. Council on Drugs, JAMA 187:664 (Feb. 29) 1964. 2. Bryans, F. E.: Canad Med Ass J 92:287 (Feb. 6) 1965. 3. Goldzieher, J. W.: Med Clin N Amer 48:529 (Mar.) 1964. 4. Cohen, M. R.: Paper presented at Symposium on Low Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965. 5. Hammond, D. O.: Ibid. 6. Rice-Wray, E., Goldzieher, J. W., and Aranda-Rosell, A.: Fertil Steril 14:402 (Jul.-Aug.) 1963. 7. Goldzieher, J. W., Moses, L. E., and Ellis, L. T.: JAMA 180:359 (May 5) 1962. 8. Kempers, R. D.: GP 29:88 (Jan.) 1964. 9. Tyler, E. T.: JAMA 187:562 (Feb. 22) 1964. 10. Rudel, H. W., Martinez-Manautou, J., and Maqueo-Topete, M.: Fertil Steril 16:158 (Mar.-Apr.) 1965. 11. Flowers, C. E., Jr.: N Carolina Med J 25:139 (Apr.) 1964. 12. Goldzieher, J. W.: Appl Ther 6:503 (June) 1964. 13. The Control of Fertility. Report adopted by the Committee on Human Reproduction of the American Medical Association. JAMA 194:462 (Oct. 25) 1965. 14. Flowers, C. E., Jr.: JAMA 188:1115 (June 29) 1964. 15. Merritt, R. L.: Appl Ther 6:427 (May) 1964. 16. Newland, D. O.: Paper presented at Symposium on Low Dosage Oral Contraception, Palo Alto, Calif., July 15, 1965. Reported in Med Sci 16:26 (Nov.) 1965.

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April 1, 1966

Editor
Arizona Medicine:

It is indeed proper that we recognize and commend exceptional warm friendly service.

I have just finished the first two-year period of total disability due to illness for which we have received the services of several insurance companies and their representatives.

The personalized services of Charles A. deLeeuw (State Representative Arizona Medical Association Group-National Casualty) has been beyond anticipation.

During critical times he voluntarily answered our "foolish" questions and tended details not related to his companies.

Our association members should be cautioned to keep their insurance status current — keep all correspondence even though it seems unimportant.

Everyone should test temselves — how much sickness insurance do I have — in what companies? — how long does it cover? — once it starts payments do the premiums have to be continued to be paid? — have extensions or other changes been made of the original policy?

It is confusing at best because of multiplicity of companies and their representatives.

Again I challenge that there are too many who do not have sufficient protection for loss of income.

A Doctor friend of mine in 1936 said "I am going to make my pile right here" — he got a big pile, today bankrupt.

Leslie B. Smith, M.D.

The Editor
Arizona Medicine
P.O. Box 128
Scottsdale, Arizona

Dear Sir:

Doctor Salsbury's account in a recent issue of *Arizona Medicine*, on "Medical Care for the Navajo Tribe," is admirable but all too modest. Apparently Doctor Salsbury's professional dignity and modesty have not permitted him to put his own role into the proper light. I feel that the record should be put straight and that credit should be given to the man to whom almost all of the credit is due.

It should be said that Doctor Salsbury's efforts on behalf of the Navajo Tribe, who were destitute, demoralized and defeated upon his arrival in that area, were nothing less than spectacular.

If the Navajo people have experienced a very gratifying decrease of infant mortality, an increase of life expectancy, and a general uplifting of health and morale, we in Arizona know who is the prime author of all this.

Another point is worthy of comment: Doctor Salsbury's success in involving the aborigines, the medicine men and faith healers of the Navajo nation into the spectrum of modern medicine and in enlisting their help in establishing confidence in a people who truly were still living in a stone age culture. This could be imitated with great benefit in many areas of the world that are only now beginning to feel the impact of modern medicine and are not quite ready for it.

Arizona having by far the largest Indian population in the entire nation, has indeed the opportunity to make unique contributions in this sadly neglected field of medicine. Doctor Salsbury has shown the way. Let us hope there will be many who will follow his example.

Yours very truly,
Otto L. Bendheim, M.D.

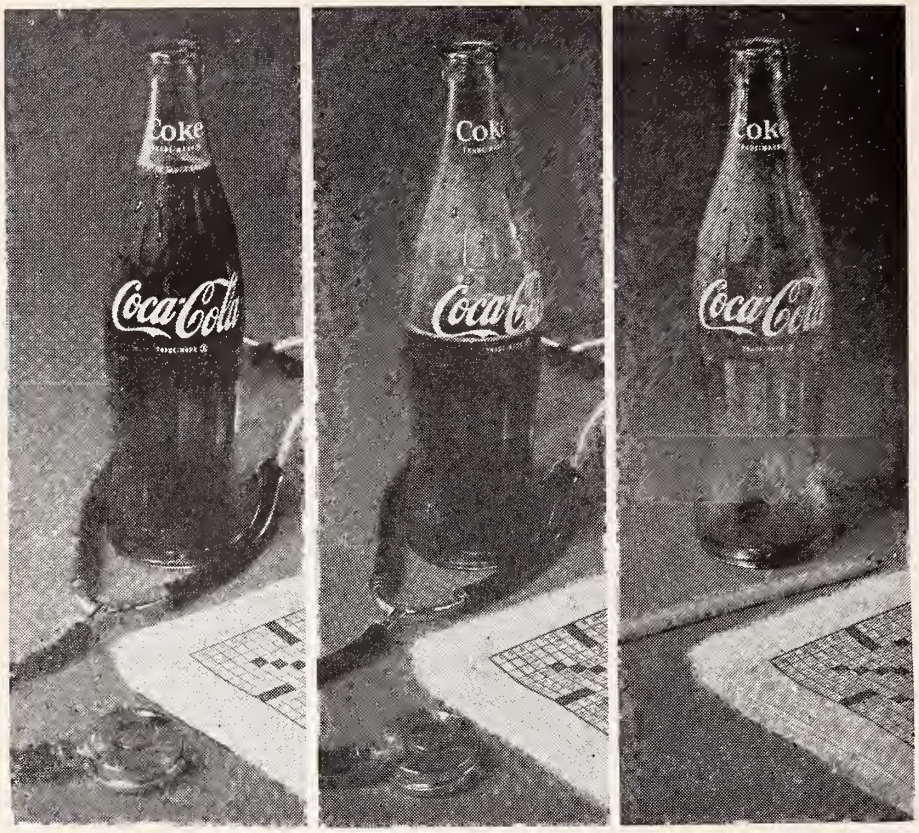
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Squaw Peak Sketches

Of Pithy Pioneer Physicians

by dry gulch jake



ITEM

NEWS ITEM: May 3, 1940

"Discovery of an explosive one hundred times as powerful as nitroglycerine by the late Dr. W. O. Sweek of the Grunow Clinic, Phoenix, Arizona, was announced in Washington, yesterday by the Senate Naval Committee."

Dr. Sweek must have had the great aptitude of causing explosions not only during his terrestrial stay but afterwards.

ITEM

This fabulous pioneer Arizona radiologist will be remembered not only for his medical activities and keen scientific interest but also for his ability as a raconteur of medical anecdotes during his time. One of them relates to himself when he was at Metcalf as contract surgeon for a copper company, there was a long incline from the living quarters of the mine on the top of the hill down to the bottom where the ore was carried or ran down in cars. He liked to ride these ore cars up and down but the superintendent of the mines told him that he could either stop that or stop working. The young physician elected to stop riding the ore cars since these went at a terrific speed up and down the mountain and not infrequently people were killed riding them. On the trail up to his living quarters from the canyon lived a miner by the name of Ford. He was rough and ready, had been a cow puncher and horse wrangler in time gone by. Our young physician said at the time he wore a plug hat, and this was similar to the one which later was characteristic of Sir Winston Churchill. In addition the physician smoked cigars, and those of us who knew him in later days when he was a total abstainer from tobacco and spirits can hardly feature this activity. At any rate he was told he shouldn't wear this plug hat out in this country as it was too much of the dude type of apparel. He persisted and on this particular evening while he was walking back up the trail to his quarters, Ford was sitting on his front step with a 22-caliber rifle. He shot the hat off of our young physician's head and then when asked what the next move was, our physician said he went over and became acquainted with Mr. Ford and after that they became fast friends.

In the summer of 1907, the mother and a sister came to visit our young surgeon at his living quarters on the top of this mountain, where more or less a barracks type of project was situated and these living quarters had a long hallway down the center. When the whistle rang everybody was supposed to take cover for this meant that the blast would be set off in the pit. This particular time the whistle blew, the blast went off and a boulder weighing fifty or seventy-five pounds came bowling down through the center alley of this house, through one door and out the other and struck a clothes basket and demolished it in the rear yard. This young mining physician soon forsook the thrills of riding the ore cars down into the pit, moved to Phoenix, practised in a general practice for about four years, specializing later in tuberculosis and at St. Luke's Home established the first clinical laboratory in the Valley. From this later grew the Pathological Laboratory where he and his associates practised pathology and radiology for many years.

Warner W. Watkins, M.D. 1883-1956

John W. Kennedy, M.D.

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ARMPAC

Five Arizonans participated in the American Medical Political Action Committee's 1966 Workshop on May 21 and 22 in Washington, D.C.

The official delegation nominated by the Arizona Medical Political Committee (ARMPAC) included Dr. Sherman Thorpe, Mesa, Dr. John F. Kahle, Flagstaff, Chairman of ARMPAC; Dr. William C. McKinley, Jr., Bisbee, and Paul A. Hayes, D.D.S., Phoenix, members of the Board of Directors, and Mr. Robert Carpenter, Association Executive Secretary.

Workshop speakers included Sen. Vance Hartke (D), Indiana; Rep. John O Marsh, Jr., (D), Virginia; Rep. Melvin R. Laird (R), Wisconsin, and Mr. Richard Cornvelle, author of the book, "Reclaiming the American Dream."

ARMPAC is approved by the Arizona Medical Association as an independent, bipartisan and voluntary committee dedicated to stimulating physicians and their wives to take a more active and effective part in governmental affairs. Committee activities are financed by voluntary contributions of $20.00 a year from physicians and their wives.

Mrs. Clare Johnson served as general chairman of a large ARMPAC reception during the Association's recent annual meeting.

ACADEMY OF MEDICAL SCIENCE OF MARICOPA COUNTY

Post-graduate medical education is becoming increasingly important to every physician. As medicine advances at an accelerated pace on many fronts, it becomes increasingly evident that something must be done to enable the busy practitioner to keep informed of these advances. In Tucson this need will soon be met at least in part by the School of Medicine. While physicians in Phoenix may also expect to benefit from the favorable environment created by the medical school, it is obvious that physical limitations will restrict the availability of medical information from this source for many years to come. So the medical community in Phoenix will have to assume a large share of the responsibility for its own salvation in this vital area of post-graduate education.

The Board of Directors of the Maricopa County Medical Society, stimulated by suggestions from several members concerned with the future of medical education in Phoenix, voted in 1964 to approve the formation of the Academy of Medical Science. A non-profit corporation bearing the name of The Academy of Medical Science of Maricopa County has since been established; and plans are under way for providing the local medical community with the latest and most accurate medical information available.

As a logical preliminary step, it was deemed advisable to integrate the many worthy programs already in existence. To this end, the Academy's active committee, headed by Robert L. Sommerville, M.D., is now engaged in providing the A.A.G.P., and the various specialty groups, as well as those hospitals wishing to avail themselves of this service, with the opportunity to use the facilities of the Academy as a Clearing-House for all medically-oriented lectures or seminars.

The advantages of a coordinating center such as the Academy are many. Two of these advantages become available to participating groups right at the beginning. One of these is the avoidance of duplication of dates; and the other is better publicity. EACH contributes to greater attendance. It is hoped that other advantages, one of the most important of which is optimum utilization of time, will accrue as the number of participants increases.

Another objective of the Academy is to bring the medical community up-to-date on a vital topic by total exposure to it through the efforts of the nation's topmost medical talent. The first such program is planned tentatively for November 26 and 27, the Saturday and Sunday after Thanksgiving. Scheduled among the topics to be so exposed is that of blood and blood products, the when, why, how and how much, so important to an increasing number of patients of all age groups.

It is the intent of the Academy's Committee to work closely with the appropriate group at the School of Medicine, again with a view to achieving a coordination of all efforts in the area of post-graduate medical education. The Academy of Medical Science of Maricopa County is conducting a new experiment in the realm of post-graduate medical education. It is worth watching.

PARATROOPER-DOCTORS

When the 82nd Airborne Division deployed to the Dominican Republic last April, with it went an unusual breed of man, the paratrooper-doctor.

After landing at San Isidro Air Base, the 82nd moved into Santo Domingo to stop the fighting and received resulting casualties.

Division medics rushed in to pull wounded troopers from the scene of conflict and administered first aid. The casualties were taken to company aid stations where 82nd doctors applied immediate lifesaving medical aid.

As soon as immediate measures had been taken, the wounded men were transferred to a battalion aid station. Here, surgery was performed and the airborne doctors administered the treatment that saved life and limb.

Within hours, the patient had been routed through the 82nd clearing station and was in an aircraft on his way back to the United States, usually to Womack Army Hospital at Ft. Bragg, N.C. Early movement to medical facilities in the U.S. helped, but it was the 82nd doctor who was primarily responsible for the low mortality rate.

After combat operations died down in the Dominican Republic, the airborne doctors performed other functions. They had been treating wounded civilians, and now they began to treat Dominicans for disease, as well as delivering babies. It was during this time that the doctors of the 82nd earned the admiration and love of the Dominican people.

Last summer, 82nd doctors accompanied division medic teams into almost inaccessible villages outside Santo Domingo to bring medical aid to the poor peasants. Many of the people they treated had never seen a doctor before.

The route of these doctors from civilians to 82nd paratroopers usually follows a uniform pattern. Most complete their internship before entering the Army, although some prefer to intern with the Army. The doctor is commissioned a captain upon accepting active duty.

He is then sent to Ft. Sam Houston, Tex., for four weeks of Basic Medical Training, except for a few who are sent to specialty training and receive their orientation to the military while in their units.

The doctor then goes to the Infantry School at Ft. Benning, Ga., where he undergoes basic airborne training for three weeks. The last week is devoted to making five parachute jumps.

The 82nd at Ft. Bragg is the next stop. He will normally remain with this unit for the remainder of his two-year service tour. He will jump with the men of the division regularly, usually once or twice a month.

At the end of his two-year tour, he may request further active duty or he may return to civilian life with the pride of having served both his country and his profession in the 82nd Airborne Division, "America's Guard of Honor."

PROMPT B_6 DIAGNOSTIC DOSE URGED FOR ALL INFANTS WITH CONVULSIONS

To prevent possible mental retardation or death in newborn babies, a Utah physician has urged that all infants with convulsions be promptly tested for pyridoxine (B_6) dependency.

Writing in the *Journal of the American Medical Association* (Feb. 7), Dr. M. Moreno Robins points out that an injection of 10 to 100 milligrams of the vitamin I.M. will relieve the convulsions within two or three minutes if an abnormal need for pyridoxine is the cause. Dr. Robins notes that "prognosis is related directly to the interval of time between onset of symptoms and treatment" and suggests that "all infants with convulsions receive an immediate diagnostic dose of pyridoxine" since "late therapy usually leaves the infant neurologically damaged and without therapy the infant may die."

In a report on two cases in the same family, the clinical investigator from The Utah Valley Hospital, Provo, records that both pregnancies and deliveries were normal with no earlier history of convulsions or unexplained infant death.

The first infant is suspected of having been pyridoxine dependent but developed convulsions and died before any treatment was begun. The second developed convulsions that failed to respond to standard anti-convulsant therapy, but these stopped dramatically when pyridoxine was administered. The infant has since received a

daily prophylactic dose of pyridoxine and is developing normally.

Pyridoxine dependency, first reported in 1954, is thought to be due to a metabolic birth defect, according to The National Vitamin Foundation, a non-profit nutritional research and education organization. The Foundation, which has supported scientific investigations that led directly to the recognition of B_6 as a dietary essential for man, adds that, like other abnormal individual needs for specific vitamins, pyridoxine dependency is not yet clearly understood.

"While the syndrome is obviously a rare one," writes Dr. Robins, "all physicians who are dealing with newborns should be cognizant of its existence since early treatment can be so rewarding and results of late therapy so devastating."

NEW METHOD OF MEAUSURING OXYGEN IN THE BLOOD

Scientists at Optics Technology, Inc., of Palo Alto, the Stanford University School of Medicine, and Palo Alto Medical Research Foundation have developed a new method of measuring the oxygen in the blood of patients without taking a sample.

The procedure, according to the scientists, represents an important advance in the diagnosis and treatment of cardiac and lung diseases where a quick and accurate determination of oxygen saturation of blood is needed.

Conventional techniques require the removal of blood samples from the patient and laboratory results are not immediately available.

Cardiologists often need to monitor oxygen saturation within the heart continuously to deetermine the presence of congenital cardiac abnormalities. Clinical physiologists also have been interested in recording oxygen saturation in patients with severe pulmonary disease in which several respiratory mechanisms must be regulated.

Researchers at Optics Technology have developed an instrument in which tiny fibers are built into a standard cardiac catheter. These transparent fibers of optical glasses allow light to travel, through an optical phenomenon known as total internal reflection, to the other end of the tube even when the fiber is curved many times.

The catheter is typically 125 centimeters long and 0.23 centimeters in diameter and contains about 100 fibers divided into three optical channels. One channel transmits light from the special source in the instrument to the opposite end of the catheter which is located in the heart, a blood vessel or the lung.

When the light enters the blood it is scattered by the red blood cells, illuminating an area of about three millimeters in diameter around the catheter tip. The two remaining channels in the catheter pick up and return the reflected light to the instrument, where it is detected at two wavelengths and converted into an electrical signal. The signal is amplified and fed into a recorder which computes the ratio and displays it on a chart calibrated directly in percent of oxygen saturation.

The method is based on the principle that chemical compounds absorb light at certain characteristic wavelengths. In blood there is one wavelength, 805 millimicrons, at which light is absorbed equally by the blood protein hemoglobin before and after it combines with oxygen. At another wavelength, 600 millimicrons, the absorption by oxygen-rich hemoglobin is markedly different. From the ratio of these two wavelengths, scientists can estimate how much oxygen is contained in the blood.

The new instrument has been under development by Optics Technology for the past four years. Work for the first three years was supported by a grant from the National Institutes of Health to the Palo Alto Medical Research Foundation. During this period, clinical investigations have been initiated by researchers at the Stanford University School of Medicine.

Principal investigators are Dr. Narinder S. Kapany, president and director of research of Optics Technology, Inc., and Dr. Donald C. Harrison, assistant professor of medicine at Stanford University School of Medicine. Major contributors are Norman Silbertrust, and R. P. Drake of Optics Technology and Harry A. Miller, research assistant in cardiology at Stanford.

The investigators made studies in dogs in which the oxygen saturation of blood was controlled by subjecting animals to gas mixtures containing different amounts of oxygen. Blood samples were removed from these animals and

the oxygen saturations were determined by conventional methods. Results showed a close correlation to those obtained with the fiber optics catheter when inserted in the cardiac chambers or blood vessels. The instrument was also used to determine oxygen saturation directly in the chambers of the dog's heart.

After the instrument was shown to be extremely sensitive, stable, and accurate, it was then used in nine patients with congenital cardiac disease, the investigators said.

It was possible to advance the fiber optics catheter through the venus system and into the heart for a continuous recording of oxygen saturation from the pulmonary artery, right ventricle (pumping chamber), right atrium (the collecting chamber on the right side of the heart), and vena cavae (the two main veins conveying blood to the heart), Drs. Kapany and Harrison said.

"Studies of the effects of breathing and various other respiratory functions were made and the oxygen saturation was measured continuously. In each of the eight patients, it was possible to localize the abnormality within the heart accurately. The diagnosis was confirmed by conventional methods in each case."

Other applications of this method have just begun to be explored by the Optics Technology-Stanford team.

It is possible, the investigators said, to determine the concentration of injected dyes within the cardiovascular system with this instrument and, thus, it can be used for continuously recording cardiac output.

The instrument may also be used for monitoring the oxygen input of critically ill patients over long periods of time in coronary and intensive care units, and for determining certain chemical compounds within the bloodstream at remote areas of the body such as the kidney and liver.

"It is apparent from the studies made thus far that it is possible to develop a larger catheter with an illuminating system which would allow visualization of the inner surfaces of blood vessels and the heart," the investigators added.

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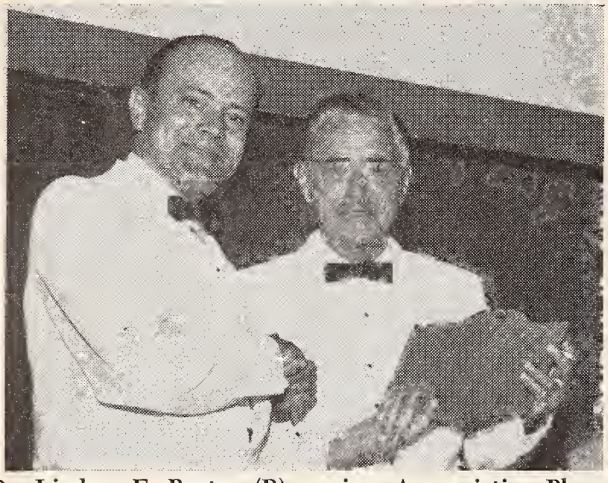
President's Banquet — Head Table — (L to R) Dr. Paul B. Jarrett, Dr. Kenneth McFarland, Mrs. Jarrett, Dr. Arnold H. Dysterheft, Mrs. Dudley, Dr. Kenneth C. Baker.



Dr. Jarrett presents Appreciation Plaque to Miss Frances Quebbeman, author of MEDICINE IN TERRITORIAL ARIZONA.



Dr. Nicolo Alessi (L) receives Fifty Year Club Plaque from Dr. Jarrett.



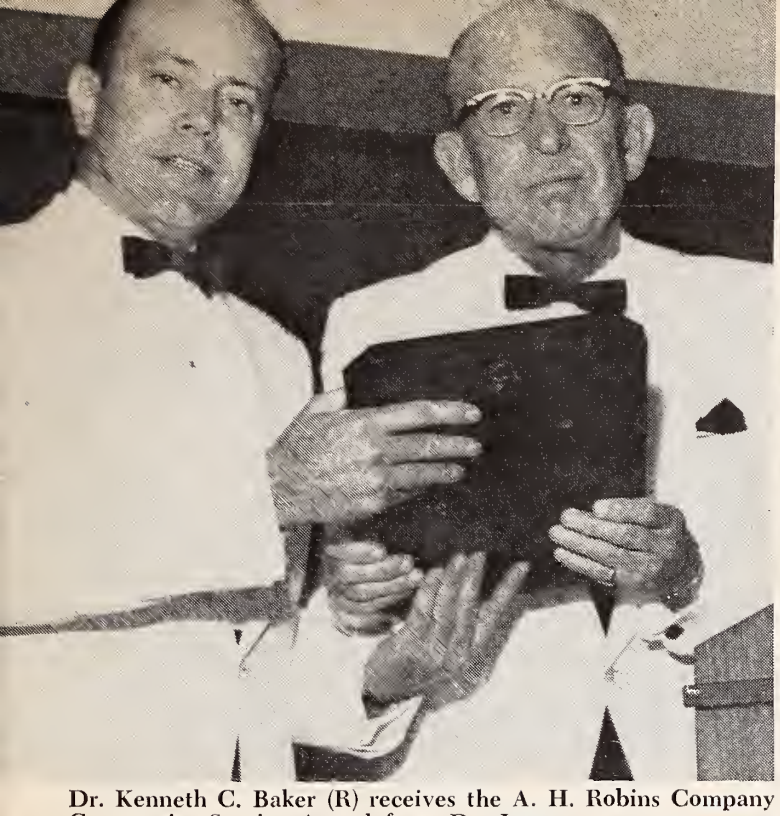
Dr. Lindsay E. Beaton (R) receives Appreciation Plaque for loyal service to the Association from Dr. Jarrett.



Dr. Merlin K. Duval, Jr., Dean, College of Medicine, (R) accepts AMA-ERF check from Dr. Jarrett.



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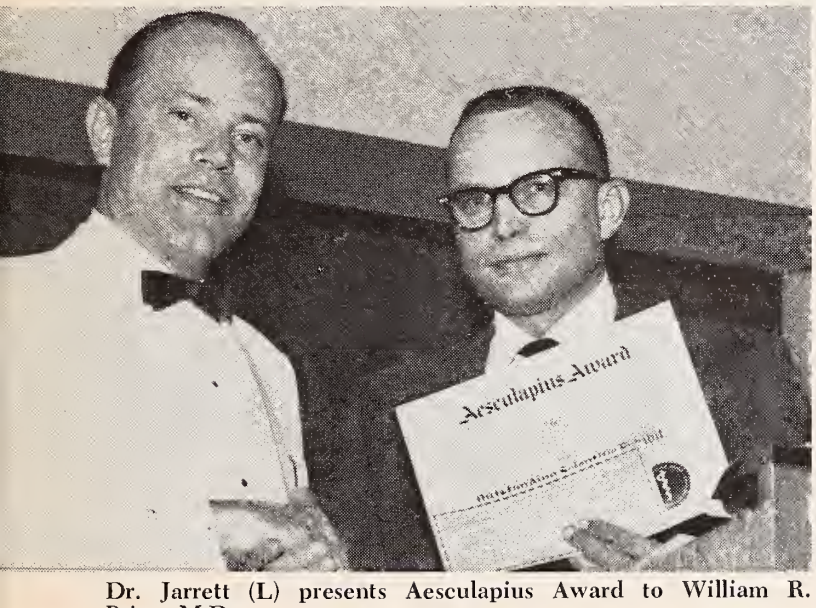


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Dr. Jarrett (L) presents Aesculapius Award to William R. Price, M.D.



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Further information may be obtained by writing **ROCKY MOUNTAIN CANCER CONFERENCE, 1809 East 18th Avenue, Denver, Colorado 80218.**

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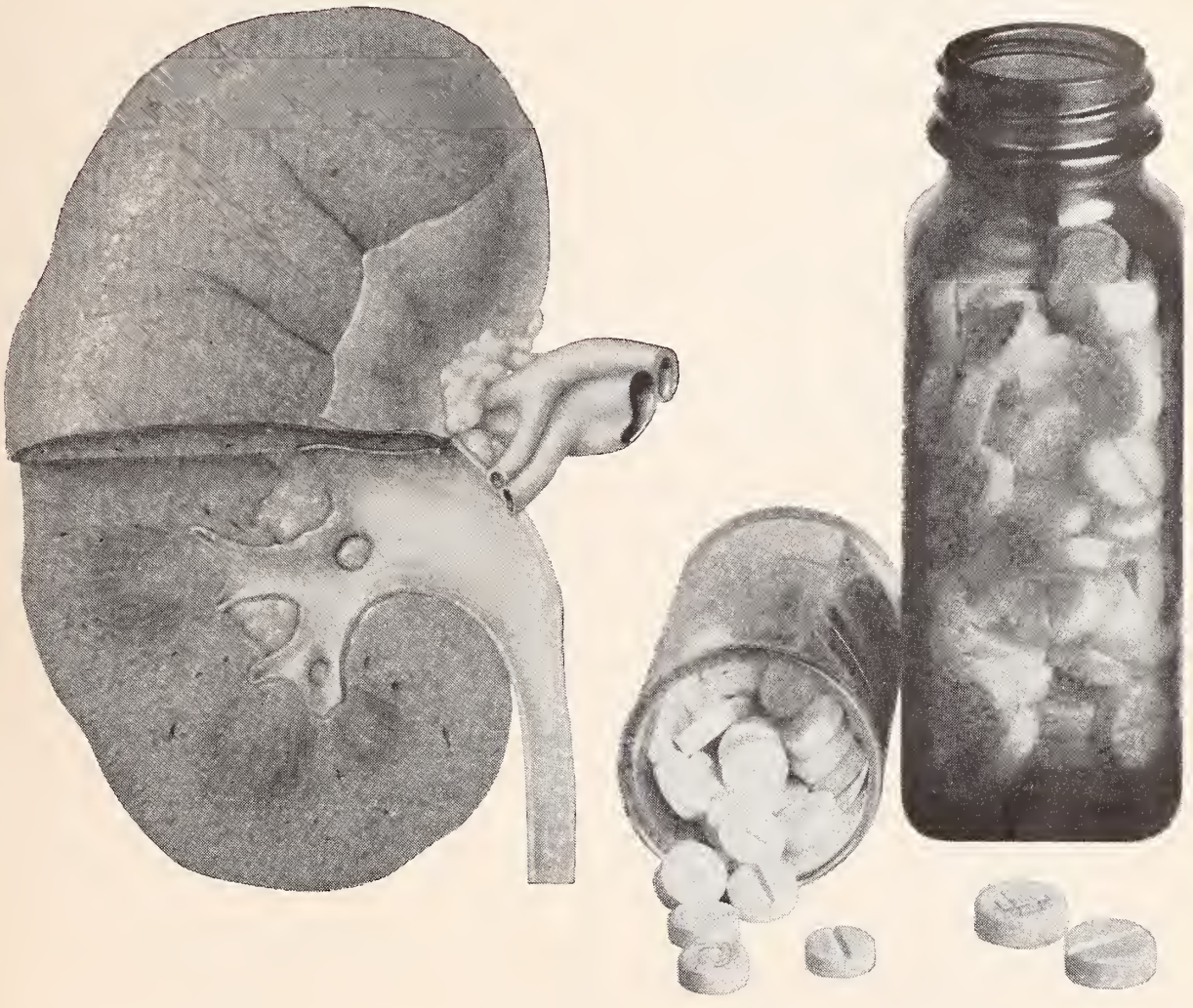
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